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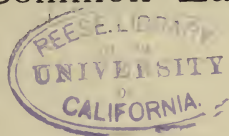
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ATLAS SERIES, No. 9.

HIGHER EDUCATION

AND

A Common Language.



BY

PHILIP GILBERT HAMERTON,

PRESIDENT MCCOSH, PROF. ANGELO DE GUBERNATIS,
AND OTHERS.

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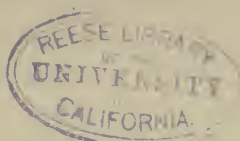
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ATLAS SERIES

No. 9.

INTERNATIONAL COMMUNICATION BY LANGUAGE.

PHILIP GILBERT HAMERTON.

AMONG the innumerable progeny of novel ideas and speculations which have owed their origin to modern facilities of communication, is the suggestion which may be met with from time to time in European newspapers, and possibly also in American ones, that men will see so much of each other in the future, and feel so strongly the necessity for means of completer intercourse, as to gradually abandon many of the languages now spoken, confining themselves to two or three of the most highly developed, and finally, perhaps, resting satisfied with one. This idea has arisen at the same time with political conceptions of equal novelty, and of a strikingly similar character. The parallel political theory is that the world will come to consist of a very few great States, which finally, either by friendly agreement or the military predominance of one of them, will place the supreme government of the whole planet in the hands of a single council, perhaps even of a single individual, in whose person will be concentrated the world-power which was the dream of Alexander and Cæsar and Napoleon, yet only partially realized by the mightiest of those three conquerors. There is unquestionably a movement both in politics and in languages which seems to lead in this direction, and to lend some countenance to speculations so apparently extravagant as these; but at the same time there are

tendencies of an exactly opposite character which may have a strongly neutralizing effect, so as to prevent forever the full accomplishment of such results as those just indicated. Thus, although the peoples agglomerate into mighty States, their feelings of nationality are certainly stronger than they were before recent changes. The Italian or German of to-day has feelings of national pride and importance that could not by any possibility have been experienced by the Tuscan or Bavarian of twenty years ago; and even the defeat of France has produced in that country a heat and concentration of national sentiment unknown under the Second Empire. Successes and failures may equally contribute to enhance the strength of national sentiment. The success of the United States in overcoming a great rebellion augmented it, just as the failure of France in a great foreign struggle augmented it also. And it does not follow that because people belonging to the same nationality can join together and form a nation, others who belong to different nationalities can join together and do the same thing, unless by the gradual process which may be called the absorption of immigrants.

If the nationalities remain, the languages will remain along with them. It is possible, no doubt, for a nation to have very powerful national feelings without a language peculiar to itself. It may have been founded by colonists, like the United States, and retain the language of the mother country; or it may be a little country surrounded by large neighbors, and use their languages as Switzerland uses French, German, and Italian, all the while preserving an intense sentiment of nationality though its languages are diverse, and all three of them foreign. But it is difficult to conceive by what arts of persuasion you could induce a great independent State, that has a tongue of its own, to abandon that tongue voluntarily and adopt another in its place, merely in order that there might be fewer languages on the surface of the earth, and less of Babel confusion. A very good argument might be made out for the abandonment of French, for instance. There can not be a doubt that English is at the same time simpler, more copious, and more useful because more widely spread, while its literature is incomparably richer. Whether for purposes of business, or of study or travel, English is a more valuable possession than French. Yet what a hopeless enterprise it would be to persuade the French to abandon the tongue which is their own peculiar inheritance! It is conceivable that if, after 1815, France had been divided like Poland, which she easily might have been, a system of rigorous repression, applied with unrelenting and

systematic cruelty, might in the course of ages have stamped the language out, and substituted for it the languages of the conquerors; but it is inconceivable how such a result could ever be brought about by the arguments of linguists. Nor would the time be well chosen just at present to offer similar arguments to Germany and Italy. They owe their unity chiefly to their languages, and are therefore likely to cherish them for ages, the duration of which it is impossible to foresee.

The uneasiness felt in traveling in countries of whose languages we are ignorant has given rise to these speculations about a possible future unity of language, and also to speculations of more modest and practicable proportions about a universal tongue, which, without displacing the languages actually existing, might be learned in addition to them by the educated class of every nation. Some have gone so far as to imagine the possibility of creating an artificial language, as you might make a lump of artificial stone, and it has been thought that a language created by human ingenuity in this perfectly conscious way would have great advantages in simplicity and consistency, and therefore be much easier to learn. One or two linguists have, we believe, actually attempted the construction of such a tongue, and although the task is one of the most formidable proportions, it may not be beyond the capacity of a man with great knowledge of the true laws that have governed the growth of the natural languages. It is probable, however, that if an artificial language were elaborately invented, and adopted by a certain number of clever men, it would be found hard and inflexible, and totally wanting in those rich resources of expression by phraseology which comes from experience alone. Hence the skepticism with which this scheme has generally been regarded by those who were clearly aware of the true nature of language. "You might invent the words," they say, "but you could not invent the thousand happy turns of expression that convey so much more than the words themselves convey." So it is believed most generally, and with good reason, that if any universal medium of communication is felt to be a necessity for mankind, the only practical way to attain it must be to choose some language already existing and make it the common medium of intercourse among men of education everywhere.

This has been done already in a natural, unconscious way. There has never been a formal convention among nations to choose a language for their intercourse, yet for long ages Latin was so employed, and French has since taken its place, though without occupying it

entirely. We are certainly worse off in Europe for a medium of general intercourse than were our predecessors in the time of Queen Elizabeth. They all learned Latin at school, in a slow way perhaps, yet in a thorough and scholarly way, and it was a substantial possession for them afterward when they used it for political or literary correspondence; but the Englishman or German of to-day is generally very far indeed from any thing like correct scholarship in French. The new arrangement by which French was adopted in the place of Latin, instead of some other modern language, may possibly have been caused by the linguistic incompetence of the French themselves, which is proverbial in Europe. Their language may have been adopted from necessity, because it was found that their diplomatists could learn no other. The ambassador who represented France at Berlin at the outbreak of the last war did not understand German, and was therefore, in a most important and even essential point, actually less qualified for his post than an ordinary newspaper correspondent would have been, or even a commercial traveler. If a modern language is to be selected as the common medium, it is clear that the State of which it is the native tongue will profit by the choice, if indeed we may consider it a benefit to be exempted from a study so useful for the development of the faculties. The German Government appears at one time to have entertained the project of displacing French as the language of diplomacy; but a common medium of some kind is so much of a necessity that the most recent idea is to seek it in modern Greek. This is not so wild an idea as at first sight it may easily appear. We are told that modern Greek is still near enough to the Greek of Plato for our study of the ancient language to prepare us admirably for the modern one, and most of us who have received what is called a liberal education know something, at least, of the former. Besides this, there is a steady tendency in Greece itself to recur to ancient forms, just as the best English poets and prose writers of the present day recur affectionately to turns of expression which were considered obsolete by our grandfathers. But the strongest argument in favor of modern Greek is said to be its perfect adaptability to the expression of new ideas and the nomenclature of new things, in which it is greatly superior to the old common medium, Latin. The wants of general society in a language, with its new sciences and arts, must be vastly more extended than the wants of an ancient body like the Church of Rome, which still uses Latin in some degree as a living language. There are certainly a few Roman Catholic ecclesiastics, we have no means of

ascertaining how many, in whose minds Latin is still vigorously alive, though not the Latin of Cicero; but even this change in the language is itself a proof of vitality, for there is no permanence in any human speech until it becomes a fossil. Some of these ecclesiastics speak Latin with an astonishing fluency, and write it with great rapidity; but the accomplishment must have been (at least to this degree of perfection) very rare at the Council of the Vatican, or the differences of pronunciation must have rendered it much less useful than might have been expected. The Pope himself uses French most frequently in his personal intercourse with foreigners of all nations, whether laymen or ecclesiastics. The advantage of Greek is that it is habitually spoken by living men, and that it would be so easy to have schools at Athens for language, as the French have one for fine art. These schools would at least settle doubtful points in pronunciation, which always constitute one of the greatest practical hindrances to human intercourse.

There has never been an epoch in history at which international communication was so general as it is to-day, and yet there has never been an epoch so unprovided with a satisfactory means of carrying it on. With his hereditary Latin, and his thoroughly acquired Greek, an ancient Roman gentleman could go to any part of the world that he cared to visit, and hold easy intercourse with his equals. The cultivated Italian or Englishman of Queen Elizabeth's time went about talking Latin well enough to converse upon subjects that were worth talking about. Here is a little scene which occurred at the University of Oxford in 1584, when Giordano Bruno visited it. Bruno was beginning to discourse upon the theory of Copernicus, when a certain doctor asked him if he could speak English, and the answer came that Bruno only knew a few of the commonest words. When asked, further, why he gave so little attention to the English language, the Italian philosopher answered at once, "*Che gli onorati gentiluomini, coi quali soleva conversare, sapevano tutti parlare o latino o francese o spagnuolo o italiano.*" And now mark what follows, and think whether our own century could match it or not: "*La conversazione incominciò adunque in Latino.*"

Here are a number of gentlemen, men of the world, and doctors of the university, sitting at their ease round a supper-table, and because a foreign philosopher happens to be present, they all turn the conversation quite readily into Latin, the subjects being the highest speculations of the time, and they go on with the greatest animation. Evidently these men really did possess a medium of communication

which is practically lost to us. If we were to attempt, without the most labored preparation, a Latin discussion on the Copernican system, we should find ourselves struggling in such Latinity as that of Lord Dufferin's famous speech at the Icelandic dinner-table. We might use Latin cleverly in fun, as Lord Dufferin did, but we could not use it in serious earnest for hours together, as those Elizabethan gentlemen did.

The next question that concerns us is whether we possess a substitute for their Latin. There is a general belief that our French is this substitute, and so no doubt it might be if it were learned with any accuracy and thoroughness; but it is surprising how rare is any accurate scholarship in French. Foreigners do not, as a rule, appear to take any pride or pleasure in being delicately accurate in French, although the language fully rewards the student who cares for accuracy, and pursues it. The plain truth is that almost every English gentleman has a contempt for French; and it is not easy to get over such a feeling as this, because it is grounded on the deepest national antipathies. One of the greatest advantages of Latin as a means of general intercourse was that no nation felt any hatred or jealousy of the ancient Romans, whose power had ceased to exist; and there was considerable tact in the proposition to select modern Greek for the same use, since the Greece of our day is much too insignificant a State to excite bitter feelings in the breasts of cultivated foreigners. M. Taine has an anecdote about a French teacher in England, who fished for a compliment by saying to an English gentleman, "You must esteem our language very highly, since you have it taught to your children;" but the Englishman answered, with more veracity than politeness, "No, we don't—we despise it." Even Sam Weller's father, in *Pickwick*, shared this prevalent feeling when he observed that he didn't think much of that language, as Frenchmen who intended to say "water" said "O." There is no such feeling in England about Italian; although whatever objections may be urged against French might with at least equal force be urged against the sister tongue; but Italy is a political pet of England; and France has been much too big and too combative for a pet.

It would be an amusing yet thankless task to trace some of the curious inaccuracies which have had their origin in this contempt. A recent critic has asserted that Alison's *History of Europe* abounds in faults in French. We never read that *History*, but daily experience in English literature in general convinces us that the critic must be right. It is almost inconceivable that any English writer

should be able to quote French correctly. Look at our journalism, for instance ! It teems with French quotations, and in every quotation there is pretty sure to be one blunder when there are not several, while the ignorance which fails to detect these is accompanied by the keenest contempt for journalists on the other side the Channel who do exactly the same thing with English words and sentences. We remember finding in an English newspaper a most cutting little article on the errors of French journalists, and yet in the very same paper there were six glaring blunders in French orthography or grammar. Some of these errors, in both countries, are merely printers' *errata* ; but many others are clearly due to persistent negligence and ignorance. Just as no Frenchman was ever able to spell the Isle of Wight or the Whig Party with any certainty, because the relative positions of the *g* and *h* embarrass him ; so the Englishman is liable to make bad shots in matters of accent which in French are of the utmost importance, since they affect both grammar and pronunciation. It is said of French journalists that they can never learn how to spell the names of English public men ; but to this day it may be doubted whether any body in England really and firmly knows how to spell the name of the well-known author of the *Vie de Jésus*. Mr. Matthew Arnold spells it *Rénan*, which is wrong ; others spell it *Rènan*, which is equally wrong ; a further experiment is still possible, which would be *Rênan*, but that would not be quite right either. In the same way we find *Doré* frequently written *Dore*, quite as great a mistake as if we were to call an Englishman *Door* when his name was *Dorry* ; and the town called *Mâcon* (famous for its wine) is nearly always written *Maçon* by English people, though they would be hard on a Frenchman if he made *York* into *Yorse*. But the mere spelling of a name or the misplacing of a title is a matter of minor importance, and does not necessarily involve gross ignorance of the language. The wonderful and beautiful blunders are those which prove that the writer has no notion how the language is constructed, in which he sticks odd bits of it together that can not possibly fit, and throws a whole sentence into irremediable confusion by altering the meaning of some particularly important word that he has utterly failed to understand. Then there are perilous transitions from one language to another, like passing from ship to ship in the open sea. Speaking of Marshal Mac-Mahon, an English writer thought it would look well to finish his leader with a bit of the marshal's own tongue, so he tacked a line of French to the end of his own English in this wise : " the marshal has *s'est suicidé* " ! Now how charmingly

that little word "has" comes in! See how perfectly innocent the Englishman is of the value of the auxiliary here! But there are wonders beyond these wonders. The enterprise of British journalism does not rest satisfied with mere novelties of verbal arrangement: it enriches the French language itself by the addition of words that no Frenchman ever heard of or even imagined. Thus, instead of saying "horsewoman," one English journalist habitually writes "an *équestrienne*." Mrs. General Baynes, in one of Thackeray's novels, writes to her sister that she finds Hindustani of the greatest use to her in France, for whenever her French runs short she supplements it with that Eastern tongue, which answers the purpose admirably. In our ignorance of Hindustani we infer that "*équestrienne*" must be a Hindu word, for there is no such word in French. On the same principle a London shopkeeper has advertised "*Berceau-nettes*" for many years, which is cockney-French of the most perfect and exquisite description.

It may, however, be very reasonably objected to cases of this kind that although there is nothing to prevent a journalist or a shopkeeper from being highly educated, it does not follow of necessity that he is so. These occupations, it may be urged, being open occupations, do not afford any guarantee of culture, and it is unreasonable to expect uncultivated people to know the language which is the common medium of communication among the learned, whether it be Latin as in Bruno's time, or French as it is supposed to be in our own. But what seems to me most deeply to be regretted is that the *educated* men of the present day do not really and truly possess any certain means of communication with each other; and that in this respect they are so much worse off than their predecessors, such as Milton and Bruno, whose Latin, from thorough preliminary scholarship and incessant practical use, was always an available instrument of expression. Our men of highest culture seem just as liable to inaccuracies in their French as our ordinary journalists and shopkeepers. It is ungracious to name a man of deserved reputation in connection with this topic, but in order not to dwell in vague generalities we will give a specific instance of what we mean. Let us mention, then, one of the most cultivated men in England, a writer of quite singularly beautiful English, whose mind is a rare example of delicate and true taste refined and enlightened by extensive knowledge and wide sympathy, Mr. Walter H. Pater, Fellow of Brasenose College, Oxford. Mr. Pater published a book not very long since, containing such French as this: "*La philosophie*," he says,

"*c'est la microscope de la pensée ;*" and on the very next page he says, "*les hommes sont tous condamnés a morte avec des sursis indéfinis.*" Fancy a scholar, fond of quoting, who does not know either his orthography or his genders! We can not think that Milton ever quoted or wrote Latin in this slovenly way. Another English author of reputation gives a list of authorities at the beginning of one of his works, among which we find that he has consulted the "*Catalogue spéciale du section Russe.*" The cultivated English of the other sex appear equally liable to these little errors. For example, Mrs. Grote, wife of the distinguished historian, wrote a Life of Ary Scheffer, in which there are several curiosities, and here is one of them. She makes poor Louis Philippe say of the republicans, "*dès qu'on leur montre le bout du corne ils vous tournent le dos.*" Now, if that unfortunate sovereign could utter such French as this, what are we to think of the reputation for literary culture which belongs to the House of Orleans?

The French words constantly used in English are often used wrongly. It would be interesting to know the origin of our habit of calling out *encore!* when we wish to hear a piece of music over again. It is just possible that in some bygone age the French may have done this, but certainly no living being ever heard a Frenchman call out anything but "*bis*" on these occasions. Then we have adopted the French word *morale*; but it is never used by Englishmen, never even by the most learned historians, without a blunder. The learned historians say, for example, "Wellington was now determined to carry on the war *à l'outrance*, and the *morale* of his army was excellent." Both these expressions are blunders. *A l'outrance* is bad French; it ought to be *à outrance*; but *morale* used in this sense is still worse. It is hardly possible to imagine a more absurd mistake, and yet it is universally prevalent among English writers. The historians mean to say "the *moral* of the army was excellent," or, in plain English, that the men were in a cheerfully resolute temper; whereas to say that the *morale* of an army is good is to affirm that its theories of morality are sound, or in plain words that the soldiers are convinced that they ought not to commit adultery, etc. *Le moral*, used in this way, means mental firmness, cheerfulness, courage to face difficulties and bear privations without being cast down into low spirits; *la morale* of a body of men means their theory, more or less severe, of moral duty and obligation. Thus a lofty *morale* may exist at the same time and in the same person with a low *moral*. You may be utterly discouraged as to tem

poral affairs, you may feel quite certain that your worldly position is hopeless, that disease and ruin have you in their clutches for the rest of your days on earth, yet at the same time your *morale* may be of an elevation and purity to gladden the angels in heaven. The converse is also true. Your *moral* may be excellent in the military sense, that is to say, you may be merry under fatigue, and look death in the face with a careless jest on your lips, yet have such a low *morale* that you may see no particular reason for not committing the seven deadly sins on the first seven favorable opportunities. Cromwell's army had both, the ideal knight of the middle ages had both, the armies of Napoleon had one without the other. The two things are so independent that their conjunction or their severance is a favorite subject of the poet and the novelist. You have them together in Sir Galahad, together in Scott's great heroine Rebecca, but only one of them in Brian de Bois-Guilbert.

Now to any one who has thoroughly realized the importance of such a distinction as this, the prevalent and constantly recurring blunder of English writers seems evidence that they are outside of French—evidence, consequently, that French is not studied with sufficient accuracy to be a clear medium of communication on moral subjects. How is it possible to discuss such subjects in that language without being aware of so wide a difference in the value of words as that which we have just indicated? And we find the same unfitness to discuss literary questions in French, owing to the habit of first translating French expressions into literal English, and then judging of them by the translation. This process was curiously illustrated by a recent criticism on a living writer, not famous, yet a gifted and delicate poet. There was a line among some very exquisite verses with the words,

“Et l'azur plein de colombes.”

The English critic asked his readers if they had ever heard any thing so absurd as “the azure full of pigeons?” and laughed at the author pitilessly. But to a French ear the expression is faultlessly beautiful; it is perfectly descriptive, and thoroughly in accordance with the true genius of the French tongue. The way in which this pernicious habit of translating a foreign tongue into our own and then judging of it by the translation excludes us from the true genius of the language and therefore from any just appreciation of its literature, may be illustrated by a single word, the word *sauvage*. It occurs frequently in French verse and in the best descriptive literature; and now let me show by an anecdote, trifling in itself, yet

interesting in this connection, how entirely such a word may be misunderstood. We remember an English officer at a *table d'hôte* who spoke French fluently enough and asked for *canard sauvage*. Then turning to me with a laugh, he said, "How absurd! *savage duck!*" Now pray observe how incapable this officer was of entering into the true meaning of the word *sauvage*, or at least of dissociating it from the perverted English meaning of *savage*. The idea of ferocity, as the ferocity of a savage dog, which seemed incongruous and therefore absurd in connection with a duck, is a purely English idea, not belonging to the foreign word at all. Consider the derivation of *sauvage*. It comes from the Provençal *salvage*, then you have it in Italian *selvaggio*, from the Latin *silvaticus*, from *silva*, a wood. And when a Frenchman hears the word "sauvage" his mind is transported at once to wild places, such as woods and meres, where wild-ducks are often found. Just so a Frenchman calls a wild plant *une plante sauvage*, and quite rightly (a plant of the woods), without suspecting that some English critic may laugh at him for saying that he knows a bank whereon the savage thyme grows.

It is unnecessary to produce more numerous instances of the sort of misunderstanding which is fatal to perfect literary intercourse in a language that has not been really mastered or assimilated. The position of the average European, not a Frenchman, supposed to be well-educated, may be described in a sentence. His Latin is useless for intercourse from his want of facility, and his French from want of accuracy. The absence of a universal means of communication produces the modern polyglot, who knows six languages well enough to order his dinner, but not one of them well enough to employ it in intellectual intercourse. The want of the age is a good common medium, available for all social and intellectual purposes, thoroughly taught to every educated child from its infancy, and constantly practiced afterward. If, as appears to be the case, our national jealousies and antipathies prevent the hearty adoption of French for this purpose, while the same causes might limit the use of English, it really does seem as if a solution of the difficulty might be found in modern Greek. The first step would be the creation of an international society having for its special purpose the use and development of the common medium of intercourse. We could not hope for the interference of Governments till private association had done its utmost; but in course of time, and in a more enlightened generation than our own, it can scarcely be too much to hope that as education is already considered to be a national question, it may

come to be considered an international concern also, and that the Governments of the future may agree in adopting a common means of intercourse for their people, just as in the present day several of them have agreed to adopt a common monetary system. In the course of a single generation, if the leaders of the human race so willed it, all educated men and women might possess a common language in addition to their own national one, and this language would quickly create a literature of its own addressed to every cultivated person on the planet. It would naturally be used for conversation and correspondence among educated people of different countries, not only for intellectual, but even for commercial purposes also.

The one serious difficulty that may be foreseen already, is the difficulty of conveying to students in different countries the exact shade of meaning which a word or an expression should be understood to bear. We already feel this very often in our own language when dealing with subjects that seem to require new and elaborate definitions of old words, and we have to make such definitions afresh in order to prevent misunderstandings which would be sure to arise without them. Every lawyer is familiar with this difficulty, and takes care that not only the general sense of the word, but the special sense that it is to bear in a document, shall be clearly settled and explained. Now every language is so closely bound up with national habits and sentiments, that it is extremely difficult to give it a meaning which may be current every where. Let us test this by one or two simple experiments. Try to translate into any other language the expression "it is un-English." The difficulty in turning this into French is that *Anglais* and *English* do not mean the same thing—there are deep reserves of international hostility, or at least of disapproval, in the word *Anglais*, and equally deep reserves of national pride and self-complacency in the word *English*. "*Une jeune fille Anglaise*" does not mean what "an English girl" means—the French expression includes a reserve of disapproval concerning what seems an outrageous amount of liberty accorded to the bold young creature in question: the English expression has not the slightest reserve of that kind, but is full of pride and praise. "*A Frenchwoman*" in England is generally understood to mean an adulteress—*une Française* means an elegant and agreeable person who knows how to dress neatly and talk well. "*A French girl*" implies a strong suspicion about morals and religion—"une jeune fille" implies the most absolute confidence in an ideal purity and faith. So you can not translate *clergyman*

into French—*prêtre* conveys a wholly different idea, as, in another way, does *pasteur*. You cannot translate *House of Commons* into French; the French newspapers always translate it *Chambre des Communes*, which, though near in sound, is as wrong as it possibly can be, for we have no *communes* at all in England, the English borough being quite a different thing, while many members of the House of Commons are elected by the counties. Besides, the French expression misses the central idea of the English one, which is that the men elected are *common* men, that is to say, not peers of the realm. Any attempt to explain to a Frenchman the shade of meaning implied by the word “commoner” would be futile; we need the familiarity with national tradition to perceive it. And all this is strictly reciprocal. There are just as many instances in which national habits and traditions make French expressions unintelligible out of France. Alexandre Dumas wrote a play lately, called *Monsieur Alphonse*. Now surely this looks simple enough, but it is not so simple as it looks. Several Italian journals tried to explain the meaning of *Monsieur* as used here in full before the Christian name, but they made some very wide shots indeed. Every Frenchman, when he sees “*Monsieur Alphonse*” advertised on the walls, seizes at a glance what Dumas intended to convey, but how explain it to a foreigner? And yet every foreigner thinks he knows what *Monsieur* means.

It might be thought, however, that with reference to matters more closely connected with the higher culture, language might have a meaning more generally accepted and understood. Yet even here the same difficulty presents itself. An excellent instance of this occurred in a speech of Mr. Lowe, when he was Chancellor of the Exchequer in Mr. Gladstone's administration. He was speaking of universities, and he said, with his usual *brusquerie* of manner, “People talk of the French university—there is no such thing as a university in France.” Mr. Lowe was quite right in what he actually said, for as he used the English word he might fairly argue that there is nothing in France answering to the English conception of a university. But Mr. Lowe was far from being so near the truth in what he thought, and in what he conveyed to his audience, which was that the French in saying that they had an “*université*” advanced claims that could not be supported. The word in the English sense means a large group of magnificent colleges and halls, with beautiful gardens, libraries, museums, and immense wealth to sustain them, clustered together in or about some quiet rural town, and frequented by young men who have finished their school-days, and pursue, or are supposed

to pursue the highest studies with the help of the most cultivated teachers in the country. It is perfectly true that there is nothing of this kind in France. The word in the French sense means a vast universal system of public instruction, with great cheap public schools scattered all over the land, but all pursuing the same methods, and a number of *faculties* for examination in some of the principal towns, the whole organization governed by the Minister of Public Instruction. There is nothing of this kind in England, and a Frenchman might say with truth, in answer to Mr. Lowe: "Il n'y a pas d'université en Angleterre." At the same time, and for the same reason, the word "professor" has not the same sense in its English and French forms. A "Professor" in England means a distinguished scholar who has accepted a highly honorable position in one of the universities, where he gives some of the results of his scholarship to an audience prepared to receive them. "Un professeur" means a wretchedly paid teacher in a cheap school, who lives in mortal dread of a superior officer in the same building, and who has, generally speaking, no position whatever in the society of the place he lives in. And now we see the difficulty of using another language; for if we say of an English university professor, "*Il est dans l'université, il est professeur,*" we convey the idea that he holds a position much inferior to that of an usher in an English grammar-school; and yet we are not speaking a language supposed to be generally unintelligible, we are not speaking the language of some tribe in the heart of Africa, we are speaking French, which is said to be the universal medium of communication for cultivated people all over the civilized world.

While fully admitting the importance of this difficulty, we may, however, observe that the tendency of modern life is to place things more and more at the disposal of people in different countries, so that if one country has any decidedly good thing, the others are pretty sure to adopt it before long. A language may be truly universal when the things it speaks of are universal. The words "sun," "moon," "stars," might be learned every where with their exact meaning; the word "baronet" can only be accurately understood by some one who has lived in English society and seen exactly what the title is worth. Now it is scarcely too much to say that every year makes things more in common among nations. The spread of the railway system is one of the most obvious instances of this; but there are many others. All words relating to railways would be really and truly understood by people in different countries; and so would the words that belonged to the use of telegraphs. Every thing

relating to science would be clearly understood in the universal language; and as it is said that the "pencil speaks the tongue of every land," so the universal language ought to be generally intelligible on matters connected with the fine arts, at least to those to whom the fine arts themselves are intelligible. War and commerce, being international affairs, might be equally well understood in the universal language.

Whatever may be the objections and the difficulties, the firm and decided choice of some language for international communication would assuredly lead to a more endurable condition of things than the present state of international dumbness or misunderstanding. Consider the wretched business which is called traveling in these days. People set off for foreign countries, and when they get there learn no more about the inhabitants than just what may be seen with the bodily eyes, having no communication with the *minds* of foreigners. The English and Americans are accomplished masters in the art of getting through foreign countries with the least risk of contamination from contact with any educated natives. Men of culture did not travel so in Bruno's time; Montaigne did not travel so; Milton did not travel so. They went to see and converse with the best and most accomplished men; the modern tourist goes to stare at a big mountain from the window of a big hotel, and talks only to his fellow-countrymen, or to native innkeepers and waiters who know his own language better than he knows theirs. Even the men of culture in the present day are much more isolated than Milton and Bruno were, and too frequently find themselves compelled to travel in the ordinary tourist fashion, seeing Switzerland, but not the Swiss; Italy, but not the Italians; if indeed Switzerland and Italy are any thing but so much physical geography unless you know the people who give them life.

THE REFORM IN HIGHER EDUCATION.

THE graduate of the highest school for general culture, in the United States, strong at home in the possession of his college diploma, finds that precious document almost a matter of ridicule among teachers and students in a German university. He finds, to his astonishment, that few educated Germans have ever heard of his alma mater. He begins with violently defending her honor as being also a university; he is met with contemptuous or patronizing smiles. At last he comes, with much reluctance, to the knowledge that the graduate of the Gymnasium, or German preparatory school, who is sitting by him in the lecture-room, and who is, probably, just about as old as he was at the time he entered college, is sounder, on almost every point, than himself; perhaps he has not read quite as much Latin and Greek in quantity, but he has *learned* Latin and Greek in a way our graduate has only dreamed of, in those delusive moments at the beginning of a term, when he hoped for inspiration and help, from his teachers, and found neither. The ex-gymnasiast has been obliged, every day since he was ten years old, to write his Latin exercise, and for his final examination has had a Latin dissertation to prepare. Our graduate, has had, perhaps, an hour or two a week for a few terms, an exercise in Latin composition, dreaded by teacher and scholar alike.

He climbs his three flights of stairs, after the conversation with his German neighbor, in a reflecting mood. Indeed it is a little startling. He has had the best his country afforded. At home, he can not go higher, and here is a man, starting now, ahead of him, with three or four years of discipline to go through before he can dare claim the privilege of being submitted to the searching

examination which is the condition of his being allowed to teach, or take any share in the intellectual labor of his country. Yet our graduate was, at home, "fit to be a teacher," could have begun the work with its impossibility of further development, and continued, to the end of his days, a highly respected instructor without dreaming of his incompetence. But his eyes have been thus rudely opened; he suffers a while from attacks of despair, then sees where the fault lay, in the false methods of his education, and sets himself to remedy it. It is of small comfort to him to reflect that the gymnasiast has never seen a boat-race, nor caught a ball; that he wears bad linen, and has absolutely no taste in neckties; that he eats with his knife, and does not know how to behave himself in company; that, in all common ways of life, he is incorrigibly "green," in short, that his books have taken out of him pretty much all the humanity he ever had. The dismal fact remains, that this fellow has been better trained than himself in all those respects for which systems of education are made. That the graduate would rather be almost anybody rather than this machine of a man, does not help away the fact that it is a remarkably good machine for doing the very things our young citizen has set before himself for his life-work. Nor does it do for him to say he is good enough for America. He sees, clearly enough, that there is a something in this training, which works, and spreads, and will, unless he is careful, take the ground away from under his feet.

These are the patent results which stare us in the face as we compare the two systems. Let us examine the causes of the difference and how we are to do away with it. We have already hinted at the first cause, the absence of prepared teachers. Let any one honestly look back over the period of his school and college life, and count the teachers who have been more help than hindrance to him; who have really, out of their own knowledge of a subject or of the best methods of studying it, done more for him than he could have done for himself with the help of the text-books. He will find the fingers of one hand sufficient for the calculation. Yet it is unquestionably true that our public schools and colleges have the best teaching material there is. It consists largely of men of inferior training, who have begun to teach because they could not afford to study further after leaving college, and having once begun, continue on by the force of inertia. The first-rate men go into professions where a wider field for ambition and enterprise is opened to them, leaving this most important of callings in the hands of men, who, tried by the highest standards, are, as a class, wanting. Not every man who knows

the Latin grammar by heart, and has read the usual quantum of authors, is fit to teach Latin, even to lower pupils. Perhaps it has never dawned upon him that there is a great science called Philology of which he has been studying a certain small part, and into which it is his duty to lead others. He has, himself, had no training in these broad points of view, and why should he see the need of it for others? How many college students have been taught that this science of philology has become the mightiest lever of modern research into the history of the past? The inspiration which comes from contact with men capable of directing them to such points of view, is wanting to our students. They grope in the dark, from week to week, laying many pages of books behind them, but getting no farther into the depths of their subject, receiving no impulse to independent study, finding no new ways opened to them, and are disgusted at the end. We recall our reading of Greek plays under the amiable gentleman who stands, perhaps, as high in his profession as any one in America. It was so many lines of Greek dramas daily, but seldom a word about the drama itself, of its place in the intellectual activity of that marvellous age, of its development, of the lives of the dramatists, of the thousand relations which should have formed the subject of a course of lectures, of which the reading of the plays should have been the illustration. And this was the highest instruction attainable in America at that day.

The community in general little knows how bad the teaching in our higher schools is. Only comparisons can make it plain, and this is not an exaggerated one. The head professor in one of the principal departments in one of our very highest colleges, enjoys the reputation of a finished scholar, and, except among his students, of a successful teacher. The unfortunates who have sat before him a term or so, have learned how false his position is. They have come to him with enthusiasm, hoping for encouragement and help, and to profit by contact with a man of learning who will open up to them points of view they could not reach of themselves, who would show them the meaning of their study, its place among other studies, its history, its bearing on the progress of science. These were their reasonable anticipations, and in return, they were more than willing to do their part, by learning from day to day, such portions of the book studied as should serve for the text of what the professor would give them. They have been disappointed. They have found in the far-famed teacher a petty tyrant, whose sole apparent object is to trip a student who has not prepared his "lesson," who goes long ways around to make a scholar ridiculous before his mates, but if any one asks a

question, extinguishes him as effectually as possible. What attention he can spare from these amiable occupations, is concentrated on a sheet of paper lying on his desk, upon which the comparative standing of his students, indeed, in many cases, their collegiate existence, depends. The insulted student must see this go on for many days and weeks. He feels that there is something altogether wrong in it all, but he has not had our opportunities of forming comparisons, and he knows it is the best there is to be had.

Let us look at the other side. Professor Curtius, in Leipzig, lectures, in a given semester, four times a week, on abstract Greek grammar, to an audience of from three to four hundred students. These are under no obligation to come to him; neither he nor any officer of the university knows who is present or absent. The professor has no charm of oratory to attract hearers, but sits quietly at his desk, or occasionally writes upon the black-board, and never departs from the simple, and to the uninitiated, intolerably dry, narrative of the history and development of this or that root or ending. He has no connection with his individual hearers, nothing to withdraw his attention from that absorbing subject which has been the study of his life. The visitor to his auditorium at the close of the term, finds the three hundred students still in their places, and is the only man in the room who is not writing as if his life depended on it. What is the force which has held these men together? Simply the sense of power which comes from contact with a man capable of giving all one seeks and having always a reserve fund. The changes and developments of a Greek root become, in Curtius' hand, living movements, bearing upon the nature and history of the people. Every line of explanation opens, to the student's mind, new possibilities and new interests. We have drawn this comparison because the positions of the two men are precisely analogous. There is absolutely no condition for the one which does not hold true for the other. The same demands are made upon our professor, as upon the German one, but his pupils, already, be it understood, as old as their German cousins, must needs wait four unsatisfied years, and then go over to sit upon Curtius' benches, and receive what they ought to have had given them at home.

Nor does the evil end with the head of the department; it spreads down to the young tutor, himself fresh from college, with no time for widening his knowledge of men and things, or making himself, in any special manner, ready for his work. The remedy must come by filling the ranks of teachers with men whose eyes have been opened by some such unpleasant comparison as we have just made

The process must, of course, be a gradual one, and in the direction from demand to supply, not in the reverse. The practical question of the hour is, therefore, how to create the demand which shall force the supply to show itself, for we have not drawn dark pictures to give an idea that there is not a bright side to them. We have endless faith in the results of the new methods, and await the dawning of a new light, that shall send back its rays to warm and inspire the older systems from which we now must draw the materials for the flame.

Let us consider the present position of a college instructor, a little more closely, what the demands actually made upon him are, and how the doing away with some of these, and the substitution of others, would force him into a position so different that he would necessarily become another sort of man. These demands, which determine the position, and limit the working capacity, of the instructor, are so closely connected with each other that they must stand or fall together. Most of them arise out of the relation of the student to his college, at which we therefore first look.

The student, entering college from the school where he has been nobody but Smith, is informed, with more or less ceremony, that he has now become a man and will be treated as such. It is not too much to say that this promise, which he accepts in good faith, is systematically broken from that day on. It was only a harmless joke of the faculty. He is called Mr. Smith, by his teachers, and in case he is arraigned for any particularly boyish freak, is informed that such conduct is unworthy his position as a man, but with these exceptions he might as well never have been told he was grown up, for all the evidence he has of it. On the contrary, he finds the supposition, at every turn, that he is still a child, and requires—always, of course, for his own good—to be hedged in with rules and regulations, none the less degrading and annoying because their working is distant and silent. He finds himself subjected to a complicated code of laws and penalties, in which moral and mental transgressions are mingled into a jumble which it would be the despair of any jurist to explain. If he basely stays away from morning prayers, his standing suffers just as much as if he had committed the intellectual enormity of preferring to learn ten pages of the text-book at once, instead of five to-day and five to-morrow. If he is unwell, and stays away from recitation, he must not only explain himself, even to telling what was the matter, but must produce the testimony of some one else to prove he is not, as it is presupposed would be the case, telling a lie about it. If he does not choose to attend church, he must be exempted at the

request of his parents or suffer the severest penalties. He is watched in his movements about the grounds, and in his own dormitory. In place of the ruder discipline of the school, where the teacher's voice or hand was always ready to keep him in a proper sense of his own youthfulness, he has become the victim of a system none the less grinding because it works without noise and makes itself felt by penalties which touch only his sense of manhood. It is not to be wondered at that the student, thus constantly reminded of his boyishness, gives up his innocent determination to accept the responsibilities of being a man, and accommodates himself to the miserable presumption that he is only an older sort of boy. But of the evil effect upon the student this is not the place to speak. Some day or other the long-delayed responsibility will come, for him, and bring its elevating influence. Still worse is the effect of this attitude of the student upon the instructor. Every belittling of the former, belittles him, in the process, and the opportunity of correcting the tendency never comes. This is the real kernel of the matter: the teacher in Germany is there to teach; the teacher in America is there to do almost everything but teach. Let any one imagine the disgust of the youngest German tutor, if his university should demand of him even to keep a list of his hearers and mark their attendance. His answer would be of the clearest description, that such matters were the business of a janitor, not of an instructor. His business is to spend his days and nights on that course of four lectures a week which is to prove or disprove his ability to fill, some day, the higher places of his department. He has no time for playing policeman. The other side of the picture should make thoughtful Americans blush. In one of our colleges which is most free from this degrading espionage, and where the tone is steadily toward higher views of the objects of education, we have known of tutors being posted behind trees in the grounds to give chase to the expected rioters, on a certain night, and if need be to come to close quarters with them. At the same college we know that another tutor, not more than three or four years ago, sprang upon a student, who was singing in the yard at night, and tried to throw him to the ground in order to recognize him. And these men were called teachers, had their regular classes every day, and gave large numbers of students their impressions of what college work meant. When the system of elective studies was introduced, that first dawning of better things, nothing was more common than for students to choose such branches as would give them the best opportunities to gain rank. The reputation of the teachers was not

for anything one might learn from them, but for fairness or unfairness in ranking. The main object in study was not to learn; that might come if it would; the first aim was to make such an appearance in the recitation-room as would force the instructor to put a high mark against one's name. The whole working of the class, tended toward the publication of the rank-list, and never a term went by without a conspiracy among the students to capture that document before the day of issue. It would seem to require but a moment's reflection to show any one how these demands of discipline and ranking overcame at the outset, the capacity of any teacher for effectual work. Before long these assume for him the place of the real objects of his life. In the recitation-room, his mind is fixed upon that fatal paper before him. While the student is reciting, instead of watching to help him, and the rest, to amplify and explain, in one word, to *teach*, he is balancing whether this be a slip of the tongue, or a want of knowledge, whether this recitation be a shade worse or better than that of a rival student, whether he himself may not, by an involuntary injustice, lose popularity, and perhaps injure the prospects of one of his scholars for some college honor. On the one side, he is cramped by his duty to his employers of presenting that sheet of paper, filled out in due form, at the end of the term; on the other, by his wish to maintain pleasant relations with the students. It is impossible for any man to fill such a place with justice to himself, and to the high calling he has chosen. Either he does what the most do, becomes a recitation-hearing, and marking, machine, or gets disgusted with the whole thing and throws it up for some profession where he may, at least, be his own man.

The reform we would urge, therefore, would be the absolute doing away with, of these worse than useless trammels between teachers and taught, leaving each free, either to assert his position, or to abandon it. This is the case in the German universities; and that such freedom is also capable of being abused we shall hope later to show. The changes we advocate would be all in the direction of setting the student on the footing of a free man, with that most powerful of motives, which every man feels when he knows that to himself alone is he responsible for success or failure. And of these changes, the first, should be the abolition of marks and ranking. The honest supporters of the system have but one advantage to claim for it, that of inducing students to work who would otherwise waste their time. On any other ground it would be utterly unjustifiable, and we believe it to be equally so, on this. This much is certain, it is an appeal to lower aims. It presumes that study in itself, can not be

made attractive enough to supply the student with that impulse from without, which it would be absurd to deny, every student and every man needs. The question is, whence that impulse shall come. There are two answers: by degrading the student, or by raising the teacher. Up to this time, the former plan has been followed; it is time the other had its turn. The student has been treated as a child, incapable of comprehending the ends for which he works, and the quality of his teachers has corresponded to this low estimate of their position. The rank-list is the refuge of incompetence. Teachers are able to maintain themselves with it, who could not keep their places a day if they were thrown upon their own resources, to interest and encourage their pupils. So teachers cling to the system as to an anchor of safety, and those—for we have such—who are capable of supplying, from their own learning and character, the required stimulus, find themselves hampered and cramped at every turn.

We are told that this system of university freedom may do for Germans, but would never work in America. Such a lame defense can only come from those who have never made comparisons. No German student can begin to have that motive to energy which our young Americans have. The visions of advance, of position, of influence, which fill the mind of every American, are unknown to the German. Let our young men learn that power, and place, are the rewards of thorough preparation, as in the end they are, and a motive is there, than which none can be more powerful. We have heard from German professors, that Americans are among their best students, from the energy with which they take hold of their work. It is simply because the young American matriculated at a German university, finds, for the first time, that the presumption of manhood is not only made, but carried out with alarming consistency. The appeal to himself, which ought to have been made four years before, at the beginning of his college career, comes to him now with irresistible force, and sweeps him on to effort and success. Our students at home have never been allowed to try what they can do. Let any one look back at his college-days, and say which instructors held the interest and respect of their students most firmly; always those who made the least talk about marks and discipline, who could afford to do away with these artificial aids. By keen instinct, the student knew his superiors, and let himself willingly be led by them. This putting the student and teacher on their own responsibility, is the characteristic of the German method. It is so simple as to be almost startling. It makes the teacher depend for his existence, as a teacher, upon his

success in the lecture-room. If he can offer anything which any one is willing to hear and pay for, he may keep on lecturing; if not, he may stop. That is the whole story. On the other side it is equally simple; if the student chooses to do good work, he finds the first minds of his country waiting to help him. If he be in earnest, he draws from daily contact with such men inspiration for his own work, and when he can prove that he has earned it, he receives the certificate of his diligence; if all this has not been worth working for, he simply drops out of the lists, and nobody knows it. It is false that the American student is not ready to put himself under the influence of these same motives. It is the teachers who dread it, as revolutionizing their position, and compelling them to exertions for which they have perhaps lost both inclination and ability. We are aware that this subject has been already discussed *ad nauseam* under the name of "recitations or lectures," but this phase of it must of necessity change with the abolition of ranking. Recitations have been seriously defended as a means for determining the relative position of students, as if this were an object worth the sacrifice of their best time and energy. With the doing away of ranking, the recitation, as a means to this end, falls of itself, and assumes its legitimate place, with the text-book, as the basis of the instructor's activity. With these new demands would come a new class of men to answer them, men trained in the methods of study, who would not view teaching as a respectable and profitable way of tiding over the first few years after college, but who would devote themselves to it as their life-work. These would be the demands which should take the place of those others, whose abolition we have been urging. The practical order of reform must be, from the doing away of ranking, toward the lecture system; the reverse effort, as it has been thus far attempted, must prove futile, because it fails to strike the root of the trouble. First set the student on the footing of a responsible man, and you have given him the motive which makes all further steps possible. So long as you insist upon his being a child, so long he will remain so; and if he enjoys the irresponsibility, and keeps along just within the bounds of what is demanded of him, as every child does, it is not his fault, but that of the false methods which have forced him to it.

We have spoken of the relative position of teachers and taught in our American colleges, and of the necessity that these relations should be, in their very nature, changed by setting aside whatever barriers stand in the way of the greatest freedom of action on both sides. As the first of these hindrances to be removed, we designated

the system of marks, and ranking, as failing in its purpose of encouraging the student, and as an insurmountable obstacle to the free activity of the instructor.

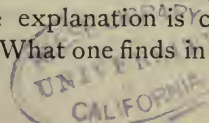
A second change, of scarcely less importance, would be to make attendance at all college exercises free to the student without giving account of himself. The same reasons hold for this as for the previous step in the reform. The rules for attendance are designed for the student's good, to insure his not losing any of the good things with which his visits to the recitation-room are supposed to supply him. As with the ranking, so here, his lower nature is appealed to. If he stays away from recitation, the result held up before him is not loss of time or knowledge, but loss of credit among his fellows. If he knows he can do more for himself in that hour, by working at his books, than by listening to the stumbling comments of his neighbors, and watching the dexterity of the "teacher" in catching them napping, no matter; he must appear in his place or be set down as a hardened criminal. Strange that it never occurs to the wise ones to begin at the other end, to make those hours in the recitation-room so useful to him, that he will see his own profit in being always on hand. We have seen German students going, day after day, to a professor whose manner of delivery was so bad that one had to compel oneself to endure it, and that on a subject upon which not one in twenty would ever be examined. In spite of these unattractive manners, they knew that at every lecture they were sure to learn something new and valuable from him, and no motive could be stronger to insure their attendance. Instead of professors giving, outside of college hours, "popular" lectures to the students, would it not be better worth the while to think of making *all* college exercises popular, in a higher meaning of that word? It will, of course, be said that our American students would never attend lectures without compulsion, and indeed we confess that the sudden abolition of the rules for attendance would probably produce some very queer results. Some excellent instructors who, by the help of rank-list and compulsion, had deceived themselves for years into the fancy that they were doing highly respectable work, would find themselves, some fine morning, before empty benches, while struggling tutors, trained in the methods of real work, would have to enlarge their boundaries. Here, again, it is not a question whether a motive be necessary; no man enjoys attending a recitation or lecture for the mere form of the thing. The question is which motive shall be applied, and again the answer is, either degradation of the student, or elevation of the teacher. It

is time that the easier plan be discarded and the more difficult one carried into effect. The argument that American students are either too careless, or too stupid, to know when a good thing is offered them, we leave unnoticed, calling attention only to the experiment now being tried in an institution whose lead is fairly sure of being followed at a greater or less distance by all the rest. Certainly the least zealous student would only need to know that his examination for promotion depends upon what he will learn in the lecture-room to insure his attendance more securely than any rules can do it. But then this examination must be in the hands of some other person than the instructor, lest he substitute some line of comment of his own for a thorough discipline in the subject.

A real danger is that instructors may be induced to attempt, by showy oratory, to attract hearers. In Germany, though instructors of this sort exist, they have never become dangerous. The difference between brilliant speculation, and solid learning, is one which, however much it may blind the ignorant, is felt and acknowledged by the real seeker after knowledge. It is worthy of remark, how this matter works in a German university. A brilliant speaker upon a popular subject draws to his "public" lectures an immense audience in the largest auditorium. For his "private" course, which must be paid for, he chooses himself a modest lecture-room, knowing well that the workers among the students in his department will prefer the slow-going old "Lorscher," who will fit them for that examination which is the goal of their academic aims. And so it would soon be with us. The matter would regulate itself, and each student, feeling his fate in his own hands, would be his own best monitor to diligence. One other objection we would answer here. It is no uncommon thing in Germany, that a student, after matriculation, lets himself be inscribed for one or two courses, and sees nothing more of professors during an indefinitely long residence. We shall be asked if we propose to allow the possibility of such a disgraceful state of things at home. Decidedly not; this is the point where the university should say, with unmistakable clearness, "we offer the student complete freedom in his attendance upon college exercises, but a student, in the true meaning of that word, he must remain." Let such cases of reckless indifference be noticed, and let there be but one swift and simple penalty, expulsion. If the student will, he shall have, with his freedom, every possible direction and assistance; if not, he is in the wrong place, and the sooner he finds another, the better for all parties. Decision of this sort would show at once the attitude of the college, and a class of

men, such as the decaying German "Junkerthum" sends to the Universities, would never come into being. Upon the question of the comparative advantages of recitations, and lectures, this would bring the verdict of the students, in a very distinct manner, to the front, and not exactly as most persons would expect. At first the voice would be overwhelmingly in favor of lectures, but time would show, as it is now doing in Germany, the real place of each. It sounds strangely but is the fact, that admission to the so-called "Uebungen" exercises, the nearest approach to recitations in most departments, is a privilege eagerly sought for and only granted to the most zealous students. Men find the necessity of a more intimate contact with the instructor, and with each other, than lectures can give, just as they found in lectures more of such contact than recitations, conducted in the ordinary manner, can give. The making attendance free, with the consequent effort to make it more of a privilege than an obligation, is a step rendered safe by its very necessity, and we wish the trial already mentioned, the removal of compulsion in the senior class of one of our great colleges, the success it deserves.

We come to the consideration of a third change, lying, it is true, so far in the future, in spite of its crying need, that it may seem foolish to agitate it now. We refer to the intimate relation of religion and education in our country. How intimate this relation is, may not be evident at first glance, but it is a fact that the two words have been almost identical in their meaning, in all the educational efforts we have made. By the side of the other partial view of the subject, the "practical," the "classical," the "business," the "American" education, we have had much to hear of a "Christian" education. As if there were danger in our day and land of any one receiving a heathen education! The wonder of all foreigners, is our religious activity, and the extent to which it penetrates every department of our national life. In no other civilized nation, not even in those where the Catholic Church holds sway, is there anything resembling this peculiar energy. We lament, sometimes, the want of unity in our American churches; it is this division which has been the source of their life and power. Men have devoted themselves to this or that utterly unimportant dogma, with an energy which the cause of religion in itself could never have called forth. In religion, the maxim has, from the beginning, been reversed; not in union, but in division, has always been the strongest and most powerful element of strength. The explanation is clear; the religious demands of men are different. What one finds in one church, another finds in another,



and so all are kept in an activity which an universal church would infallibly destroy. So long as this sectarianism confines itself to religious affairs, it may go to almost any extent without serious injury. The moment it leaves the domain of dogma, and asserts itself in the common affairs of life, it becomes fatal to the highest progress. Such a transgression of its limits, has sectarianism committed in the matter of education. We have spoken of the unparalleled display of individual liberality and energy in the foundation of our collegiate system. All honor to the men who saw so far into the future, as to lay their offerings on so worthy a shrine; but unfortunate for us that their vision did not include the prospect of a mighty state called upon to take its stand by other states, and measure its forces with them. The uncounted millions of private wealth that have gone into our colleges, have been given, not in the first place for education, but for religion. Undoubtedly before the mind of the donor was some indistinct vision of science as a means of elevating his country, but the near and controlling motive has been, especially in the earlier portion of our history, the cause of religion. It is not to be wondered at. The founders of our state were men to whom the welfare of their souls was the all important object of their life, and to whom intellectual progress was a secondary consideration. The end of education, as of everything else, was the glory of God, and whatever seemed to those iron-hearted men to interfere with a right perception of that aim, no matter how essential a part of education it might be, must fall away. Thank heaven for the Puritan spirit, and that what was best in it—the sacrifice of everything to gain an end—has not died out from among us; but the day is past when the line between religion, and education, can be left in so confused a state. The trammels which this peculiarity of our nation has laid upon our whole higher education, must be removed, if we dare hope to reach the highest, to take our side by the side of other nations in this field, as we have already surpassed them in others. The rivalry of the American churches, has been the life of the American church; the rivalry of education will be the death of education. Indeed, the expression is an absurdity; there can be no rivalry of education, for the thing itself is one, and admits of no division.

Educated men, to whom the question where they shall educate their sons is simply where they will have the best advantages for study, little know the anxiety of the uneducated but conscientious father, when the same question comes to him. With him it is a question, not merely of intellectual, but also of moral bearing. He

knows nothing of the progress which this or that college has been making, nothing of the men who are the controlling powers there; what impresses him vastly more is, that here his son will have to attend prayers but once a day, there twice; that here he may be allowed to attend church outside the college grounds, that there he must hear two sermons every Sunday from a clergyman who will be sure to preach the same dogmas his son has heard all his days in the paternal pew. These are things the father understands, and, inasmuch as the welfare of his son's soul is more important than that of his mind he decides the momentous question on these grounds. He has acted honestly, with a prayerful desire for his son's highest welfare, but we know with what a fatal confusion of two utterly distinct, almost irreconcilable principles. This is the process which every year passes in the minds of hundreds of parents, and so the sectarian schools are kept filled, and the evil of division is perpetuated.

A similar logic governs most of the bequests which are made in the name of education. A successful merchant has amassed a fortune, and, when he has no further use for it, fancies he can do nothing better than apply it to the assistance of some struggling institution of learning. He has consulted his clergyman on the subject, and learned that it is a place where attempts are being made to give young men a "Christian" education. Of course no "unchristian" doctrines, that is, none differing from his own, will be taught there. Or, a man who has gotten still higher up into the millions, thinks nothing can be finer than to found some new school with his name upon it, and the protecting mantle of some religious sect thrown about it. All such plans sound well, and it seems a paradox to assert that such efforts tend rather to impede, than to advance, the cause of the highest education. It is, however, the case. They serve to spread a certain sort of education over a wider field, but do not lead to the result toward which all our reforms should be directed, the educating of our schools to such a standard that the present annual migration of our young men to Europe will no longer be a necessity. While these new institutions are springing up all about us, absorbing in the first necessary expenses, generally, a large percentage of their capital, the older colleges, even the wealthiest of them, are struggling to meet their current expenses. In these older colleges are already on hand the first necessities, buildings, teachers, and books, and up to a certain distant point, the number of students could be increased without new expenditures in these directions. Then, whatever private liberality might add, could be devoted to such

improvements as the time demands, and which can now be afforded by none. The new colleges reach, perhaps, the point to which the older ones have come, and then all stand still at this level for want of the concentration of forces which would forward the whole cause. It is in this sense that the multiplying of schools retards the progress of the higher education. Each one of the many, feels itself cramped in just the directions in which it should have unlimited freedom. We have spoken of the fact that our best men are attached to other spheres of labor, and the ranks of our teachers filled with second-rate material. How true the statement is, the efforts bear witness, which our colleges are making, to draw from the professions men of distinction, to take the place of teachers. It is the best that can be done, but vastly better if such men could see their advantage in beginning in their youth the academic career. As it is, one may easily fancy what a mental struggle is necessary, in our country, before a young man of ability will make up his mind to sacrifice the prospects of a brilliant career, and ultimate wealth, as a lawyer or doctor, for a thousand a year as a college tutor, and the chance of waiting a dozen years for some one to die before he can be promoted. Meanwhile, to live, he must give private lessons, which take away from his work the time and thought necessary to its successful performance, and we have the teaching we have. Yet it is a calling demanding no less ability, not merely of the cramming order, of the kind which keeps a man at the head of the rank-list, but of the same sort which will give a man success in other professions. We believe, with all heartiness, that our colleges are paying as high salaries as they think they can afford. They are forced to every expedient to keep themselves above water, even to the fatal one of raising the prices of tuition, and the cost of living for the students.

One instance of this mutual learning process among our colleges, would seem to show the absurdity of it in so glaring colors that no time should be lost in doing away with so anomalous a condition of things. Almost within a stone's throw of one of our largest universities, is another college, making the same pretensions, obliged to keep up the same appearances, to support proportionately more teachers, and all to what purpose? In order to furnish a kind of education to the sons of people who hold a certain theological dogmatic quibble, differing from that particular quibble which the larger school is supposed to represent by so fine a distinction that the finest theological hair-splitter has not yet succeeded in finding it. The smaller college condemns itself to insignificance; the larger could absorb the pupils

of the former and give them at least as good an education without perceptible increase of expenditure, while the revenues of the smaller, freed from the useless struggle for existence, could be applied so as to lift the combined institution to a higher plane, to the advantage of both. This is perhaps the most striking instance of the injurious effect of confounding religion with education. We would carry work still further, to the point of uniting the colleges of each state into a combination which should be infinitely more of a power than all together can now exert. Let there be in this combined institution, religious teachers of as various shades as there are denominations for them; let the students have the privilege of following, in this respect, whomsoever they please. The sectarian preachers would here have a field vastly more attractive than now, when they know that the majority of their hearers are already on their side, and the unsectarian could safely trust to the influence of the highest education to show the difference between learning, and believing. That rivalry, which we have called the life of religion, would be increased; the rivalry which must prove the death of the best education, would be removed. The motive for supporting sectarian scholars has vanished with the years. The pretense that this or that study must be avoided as dangerous to the true faith, and that to this end separate schools must be founded where the scholars can be treated to an expurgated edition of education, has no longer the attraction it once had. It is a suggestive sight to see, at Leipzig, a number of young American calvinistic clergymen listening to men whose doctrines they must believe to be utterly false, for the sake of combating error with its own weapons. Such a combination of educational forces as we have been suggesting, would be dangerous to any dogma, only in so far as it had already degenerated into a superstition.

We know what a storm there would be about the giving up of individual interests if such a plan should ever be seriously discussed. Such arguments remind one of the long resistance to unity of the little German states, each condemned to absolute impotence, and each as tenacious of its own interests as if it were a power of the first rank in Europe. There can be here no diversity of interests. The ends pursued are identical; the single question is how shall the means at hand be most effectually applied, without consulting for a moment what particularism will have to say. We have been told, it is no use urging such a reform as this; the particularistic spirit is too strong; each will hold by his own. Indeed, one might, at first glance, be almost tempted to sigh for a central power that

should say "it shall be so." But rather a thousand times let our education stand where it is, and our young men be driven across the water to complete their preparation, if need be, than run the greater dangers which a central controlling agency would bring with it. Europeans say of us, we can do anything of which we see the profit to our own pockets, but that if it should come to sacrificing interest for principle, and for far distant goods, we should fail. We could fancy no more convincing proof of the falsehood of this charge than such an effort as we have been suggesting. It would stand, with the late war, among our grandest assertions of our purpose to make a state where material prosperity shall but serve as the means for carrying us up to the farthest heights of moral and intellectual greatness.

We have endeavored to point out the various steps by which, in our opinion, the highest educational ideal is to be attained. First, the acknowledgment to ourselves that we have no other objects to reach than other peoples have, and that we dare not be content with anything less than the highest. We must then put the student upon his proper footing as a man, with the right which belongs to man's estate, of choosing what he will study, and from whom; at the same time providing him with every possible assistance and direction in his choice. Following this first necessary step, would come the doing away with all barriers, between teacher and taught, which hinder the free exercise of the powers of each; then lectures in the place of recitations, with their possibility of larger classes, and higher demands upon the instructors. Last of all, the sharp division between religion and education, doing away with every reason for the maintenance of our present multitude of sectarian schools, and bringing the possibility of that union by which the resources of all can be applied with tenfold profit. These changes, each of them, depend upon the previous one. They must follow each other, in that order, in the irresistible progress toward the highest. We confess our backwardness by sending our sons to other schools after we have sent them to the best we have at home.

It has been our attempt to sketch the outlines of a plan, by which, in gradual progression, and with some sacrifices of minor interests, this great end may be attained. We have needed no presidential message to assure us that the condition of our existence, is the spread of education among the masses of our people. Already we are seeing the accomplishment of this first condition, with most satisfying rapidity. The problem as yet unsolved is as to how we are to provide for the higher, and highest, education of those who will give to their country the results of their training.

UPPER SCHOOLS.

JAMES MCCOSH, D. D., LL. D.

WE all have heard of—some of us have been personally acquainted with—the oblivious man who built a house of two stories, each large and commodious, but who was somewhat mortified to find at the close of his work that he had neglected to put a stairway between. We could name some very wise countries which have been guilty of a like neglect in the erection of a more important structure. They have excellent elementary schools, and colleges of eminence, but they have no generally diffused means of enabling promising youths to rise from the one to the other. A set of Upper Schools, reaching every district of the country, practically open to all classes, rich and poor, and under highly educated teachers, is the grand excellence of the systems of education in Prussia, Austria and Holland, and is the crying desideratum in England, Scotland, Ireland, and the United States.

So far as ELEMENTARY or PRIMARY Schools are concerned the United States rank as high as any country in the world. Other nations have been looking to them, and have profited by the example which they have set in earnestly seeking to furnish a good education to every child in their wide dominions. All Americans feel that if their republican institutions are to continue and to prosper, they must have an education as universal as the suffrage. But in gratifying their national sin of self-adulation they must not allow themselves to forget that other nations are making rapid progress, and if the States are to keep before them, or even to keep up to them, they must be anxiously looking round for suggestions, and ready to adopt improvements from all quarters. In one respect the educational system in the States is behind that of several nations of Europe, and, unless they awake to their usual energy, will soon be behind those of Canada, Australia, and even Hindostan. They are without that organized system of superintendence by highly educated Inspectors,

set apart for the special work of visiting and examining schools, which is in thorough operation in England, Scotland, Germany, Austria, Holland, and other lands. The author of this Article is so old as to remember the time when the systematized inspection was introduced into Great Britain, and he noticed the immediate effect produced on the character of the teaching. We may sketch the Irish system of inspection, which is the most thoroughly organized we have fallen in with in any country. First there is a Board of Education in Dublin, with two high class School Inspectors, a Protestant and a Catholic, ready to visit any school in which a difficulty arises. There is a Head Inspector in every county, a man of scholarly attainments, and paid at a higher rate than the professors in American Colleges; and there are trained Sub-Inspectors in every district, receiving upwards of a thousand dollars a year, besides a limited sum for traveling expenses. It is the business of these Sub-Inspectors to visit every school in their district at least once in the half year, if possible, once in the quarter; and in doing so they see that the scholars are properly organized into classes, they examine every class and every pupil, take down on their books the designation of every class and every pupil, mark the precise stage at which every class and every pupil is, and leave, in a book kept in the school for the benefit of the teacher and local managers, and open to inspection by all, their estimate of the school, particularly mentioning both the excellences and defects. When a defect is pointed out in the organization, or in any particular department, such as arithmetic or grammar, the teacher and local manager are bound to see it removed. If this is not done by the time of the next visit, if the class in any study is as far behind as it was, the case is reported to the Dublin Board, which issues peremptory orders, which are sure to be attended to, as otherwise the salary will be withdrawn. If any dispute arises, which seldom happens, there is an appeal open to the County Superintendent or the Board itself. Besides these visits of formal examination the Inspector may look in upon the school at any time he is passing, to see that proper order and prescribed hours are kept. There is not in Ireland any such thing as we have have seen in America—a school opened half an hour behind the time. This inspection is far from being obnoxious to the teachers—is never disliked by good teachers. They are enabled thereby to get valuable hints by which they profit. They are encouraged by the favorable notices taken of them. Their work is felt to be less of a drudgery when they find it appreciated; and excellent young teachers have a means of letting their

excellence be known, and are put in the way of promotion. Parents and the community generally all know and acknowledge the benefit derived from this superintendence, in the stimulus given to the teacher, and the improved efficiency and accuracy of the instruction he imparts. We have something of the same kind in the States in the local superintendents, and especially in the superintendents of education in certain cities. We believe that these officers have done much good. We are not recommending the abolition of their office or the dismissal of any. The best of them might be chosen as inspectors, and the inspectors might organize the work of all of them, so as to make it thoroughly efficient, and reach every class and every scholar in the school. It is evident that local superintendents not separated from business avocations have not the power and the means of elevating the education of a district to the same extent as educated men trained for the purpose, above district prejudice and prepossession, acquainted with the improved methods of teaching all over the world, and ready to introduce them into the most remote country regions. Some of these ends are gained by the papers and discussions in the Teachers' Institutes, but they will never reach every school till they are carried thither by the personal experience of an inspector. We know that many of the most enlightened educationists all over America are beginning to feel the want. We find a very strong expression on this subject by the State Superintendent, Mr. Newton Bateman, in the Report from the State of Illinois, 1871-2 :

"Sooner or later, and the sooner the better, there must and will be some effectual means provided to secure *competent and qualified* county school inspectors. Around the fact that in some counties the office is held by persons notoriously unfit for the position, and incapable of performing its duties, cluster nearly all of those objections to the office which have in them a color of reason and force." "It is believed that this great evil *can* be reached, and that it ought to be as speedily as possible. The interests involved are too weighty, the results too far-reaching, to be needlessly sacrificed." "It is a solecism in our school system that while no teacher can be employed or paid in any school of the State, under any circumstances whatever, without due examination and licensure, no conditions or qualifications of any kind or degree are required of the man who conducts the examination and issues, or refuses to issue, the licensure."

We could point out some other defects in the elementary education of this country, such as the neglect, in too many schools, of music and drawing, so fitted to interest young children, and in the want in many places of graded schools, and an organized system for encourag-

ing promising pupils to rise to higher branches; but we despair of seeing these improvements carried till the influence of an educated body of inspectors is felt in every district and in every school. If we had a body of enlightened inspectors visiting every country school, and interested in the boys, they would feel a pride, and lead the teachers to feel a pride, in sending up youths to the secondary schools, and in the end to the colleges. This brings us to our proper subject,

UPPER SCHOOLS.—We may give a brief sketch of the more famous systems. I begin with

The Gymnasien and Real Schule of Germany.—The author of this Article visited these schools some years ago, and can speak from personal observation. He received from the Minister of Public Instruction authority to visit any school in Prussia. This was published in the newspapers, and wherever he went the professors waited upon him and offered every facility for inspection. He visited a sufficient number of schools, both in the large cities, such as Berlin and Halle, and in the smaller towns, to be able to judge of the system. The German State educational systems are distinguished for the thoroughness of their organization. There is an arranged unity and a skillful gradation in them from the lowest school up to the highest university—such as Berlin, with its two hundred instructors, professors extraordinary and ordinary, and docents. The boy enters when about six years of age, and as education is compulsory, or (to use Mr. Northrop's more expedient phrase) *obligatory*, all are receiving instruction by that age, and you do not see in Prussia those idle ragged Arabs who are constantly pressing themselves on our notice in the great cities of Britain and America. By nine or ten the boy is ready for the Gymnasien or Real Schule. These two kinds of schools differ from each other, in that the one gives the more prominent place to classics, and the other to science with its practical applications. We believe it to be a disadvantage to children to be obliged to decide between those courses at so early an age, when neither they nor their parents can tell what are their talents, or even their tastes. Besides the Gymnasien and the Real Schule there is all over Germany the Bürger Schule, intended to give a good education to artisans, and in the Höhere Bürger Schule instruction is given in the high and refining branches. These three kinds of institutions are generally diffused: in every large city you will find, not one, but it may be two, three or more of them; there is one in every town of considerable population, and in every important centre of population, so that they

are accessible without very much inconvenience to every child. Each of these may have half a dozen professors, commonly erudite men—more so than many holding chairs in the American Colleges. We are happy to be able to produce the statistics of German secondary schools, prepared with care by the Bureau of Education in this country, and kindly forwarded by General Eaton through Mr. Warren:—

STATISTICS OF GERMAN SECONDARY SCHOOLS—1871-1872.

(From official sources.)

1. *Gymnasie* (Classical Colleges). (Population of German Empire, see note.)

| | | | | | | | |
|----------------------|---|---|---|---|---|---|---------|
| Number of gymnasias | . | . | . | . | . | . | 564 |
| Number of students | . | . | . | . | . | . | 108,694 |
| Number of professors | . | . | . | . | . | . | 6,951 |
| Number of graduates | . | . | . | . | . | . | 2,906 |

["Graduates" meaning here only those who have entered the university.]

Number of volumes in libraries (237 libraries reported) . . . 1,661,875

One person in 377 of the whole population of Germany has a gymnasium education.

One gymnasium to 32,805 of the population.

Average number of students to each professor . . . 15

Average number of graduates from each gymnasium . . . 5

Average number of volumes in each library (237 reported) . . . 7,012

2. *Real Schools* (Non-Classical Colleges.)

| | | | | | | | |
|------------------------|---|---|---|---|---|---|--------|
| Number of Real Schools | . | . | . | . | . | . | 481 |
| Number of Students | . | . | . | . | . | . | 87,570 |
| Number of professors | . | . | . | . | . | . | 4,756 |
| Number of graduates | . | . | . | . | . | . | 1,238 |

["Graduates" meaning here only those who have entered some higher Technical school.]

Number of volumes in libraries (168 reported) . . . 264,476

One person in every 468 of the whole population of Germany has a Real School education.

One Real School to every 85,360 of the population.

Average number of students to each professor . . . 13

Average number of graduates from each Real School . . . 8

Average number of volumes in each library (168 reported) . . . 1,574

3. *Grand Total of Male Colleges* (Gymnasias and Real Schools) in German Empire.

| | | | | | | | |
|----------------------|---|---|---|---|---|---|---------|
| Number of colleges | . | . | . | . | . | . | 1,045 |
| Number of students | . | . | . | . | . | . | 196,264 |
| Number of professors | . | . | . | . | . | . | 11,707 |
| Number of graduates | . | . | . | . | . | . | 4,144 |

(604 colleges reported.)

| | |
|--|-----------|
| Number of volumes in libraries (405 reported) | 1,926,333 |
| One male person in every 209 of the whole population of Germany has a secondary (college) education. | |
| One college to every 39,290 of the population. | |
| Average number of students to each professor | 16 |
| Average number of graduates from each college (604 colleges reported) | 7 |
| Average number of volumes in each library (405 libraries reported) | 4,756 |

This shows how ample the provision in Germany for the advanced education of youths. That there should be upward of 1000 such schools, or as they would be called in this country, colleges, in the German Empire, that instruction should be given in them by nearly 12,000 learned teachers, that there should be nearly 200,000 youth, attending them, shows a state of things unequalled in any other country or age.

The full course of study in a gymnasium runs over nine years. There are in all six classes, the three lower occupying a year each, the three upper two years each. Let us look at what the student has done at the end of five years, that is when he has gone through the three annual courses and the first biennial, and may be fourteen or fifteen years of age. Besides religion, (taught too often by infidel teachers) he has been taught the German language, Geography and Arithmetic, Latin Grammar with selections from Cæsar and Ovid. Greek Grammar with selections from Xenophon, French Grammar and Composition, elements of Geometry with lessons in Botany. Mineralogy and Anthropology, and German, Greek and Roman History. The youth would not be fit to enter Freshman in America, but he has learned branches of which our Freshmen are ignorant. Four years after, at the end of the nine years' course, he is fully as good a scholar, he is commonly a more accurate scholar, than if he had passed through the freshman and sophomore classes in the best American colleges.

The system pursued at the Gymnasien and Real Schule is slow but systematic. A youth is not allowed to tumble in at any place, as he may do in a British and American school, and perhaps prepare himself for college by the study of classics for a single year. He must begin at the beginning and cannot pass over a class *per saltum*. We have sometimes felt that while there is more of drill exercise in the German schools, there is less of life and independent study than in the best American and British schools. At about the age of eighteen, the youth leaves the gymnasium and he may apply for certain public positions, as in the post-office and the revenue. These

offices cannot be obtained by those who have not gone through the course. In this manner Germany fosters learning in a way unknown in this country, and has secured a well-educated and generally a high-minded and trustworthy body of public servants. Or, the youth may now—not sooner or by any other method—pass on to a university, and then for the first time he is allowed independence of thought and study, and is often tempted to abuse it by the lectures of the professors, each of whom is ambitious to display originality, and thus attract pupils. The strict discipline which guarded him so effectually in his earlier years is now relaxed, and numbers give themselves up to beer-drinking, and sword duels, returning to systematic study only after two or three years of idleness, and this from fear of the final examination. During the college course there are no recitations, or periodical examinations. At the close there is a very rigid examination, not by the instructors, but by a competent commission—it is surely to be desired that the examination for degrees in the American colleges, should as in the British and German colleges, be handed over to examiners who have not taught the candidates. Those who pass the examination can go on to the higher professions such as the bar or the church. By this organized system of instruction, and by the government departments co-operating, and requiring on the part of those who apply for public offices lower or higher, that they have passed through a course at a secondary school or university, Germany has secured a large body of educated citizens. There never was so well educated a body of men in any army as that which Bismarck and Moltke took with them into France in the late war; and every one grants that this intelligence helped to make them triumphant.

The Endowed Schools of England. The character of these is well known. The funds have come from old endowments, the value of which has greatly increased from the rise in the price of property. They are almost all connected with the Established Church of England and are associated directly, more frequently indirectly, with the universities of Oxford and Cambridge. They are attended by the sons of the nobility, or the wealthier under-classes who wish to get their sons into good society. The classics form the basis and the main body of the teaching which is imparted by learned men trained at the great English Universities. The classical teaching at these schools has certainly been the means of training the great body of the eminent statesmen and orators which England has produced. A first class English school, if it does not impart much general

knowledge, contrives, by its open air exercise and the manliness of its school life, to prepare youth for acting their part in the world; and the high studies have sharpened the intellect of many and produced a refinement among a select few, such as you will find with difficulty in any other country. Of late royal commissioners have carefully inquired into the state of these schools, and exposed their enormous defects, especially in the neglect of modern languages, science and English composition, and these branches are now being introduced, though rather in a grudging manner, into a number of the schools. Attempts have been made of late years, with partial success to establish in various places Middle Class Schools—a very objectionable phrase as it seems to exclude the children of the poor, who are in fact excluded by the high fees exacted. Scattered throughout England we have also a number of schools started on the teacher's own adventure. But in respect of the number of secondary schools, and the utter want of a provision for giving a high class education to the children of the poor, there is no advanced country in the world so deficient as England.

Irish Upper Schools. Much the same may be said of Ireland. It has two excellent universities, Dublin, and the Queen's with its three Queen's Colleges. Its secondary education consists of a number of Royal and Diocesan schools which have much the same excellences and defects as the endowed schools of England, and are the feeders of Dublin College, leaving the Queen's Colleges without suitable preparatory schools. Besides there are a few excellent academies in such places as Belfast, Londonderry and Coleraine, supported by associations interested in education.

Parochial and Burgh Schools of Scotland. In respect of Upper Schools Scotland differs widely from both England and Ireland. The educational system of Scotland was projected by John Knox—whose character, so long maligned, has been successfully defended by McCrie and Froude—who proclaimed that there should be an elementary school, open to all, in every parish, a grammar school, with Latin and Greek, in every burgh town, and a university in each of the four leading cities. What he recommended he was enabled to execute by the unequalled energy of his character. The Parochial Schools of Scotland constitute the first example of an education provided for the whole of the people. It is the peculiar excellence of the Scottish system that the parish schoolmasters are acquainted with Latin and elementary mathematics, and many of them know Greek, while some of them are very superior scholars, especially in

Aberdeenshire, where their salaries are augmented by the Dick Bequest. The consequence is that in Scotland every boy has within a short distance of him a teacher fitted to instruct him in the higher branches. A considerable number of the students in the four universities have come up directly from the parish schools. In every chartered town there is a burgh school, with a number of teachers: a teacher of English, with assistants; a teacher of Classics; a teacher of Penmanship and Mercantile branches; a teacher of Arithmetic, Mathematics, and Science; often a teacher of French and German; and a teacher of Drawing. Each boy may take what branches he pleases: may take classics without the mercantile branches, or the mathematical and scientific course without the ancient languages. There is often a difficulty in arranging the hours to suit the tastes of the pupils; but the Board of Teachers contrives somehow or other to meet the wants of all. There is a well-arranged course for those who are preparing for college. The scholarship is not so high at these burgh schools as in the German Gymnasien, but it is as well fitted to prepare youth for the business of life.

We might dwell on the educational systems of other European countries, but our space does not admit. The Austrian system is modeled on the Prussian, and is very little behind it. The grand hope of Austria lies in its admirable schools. Much the same organization is found in Holland. In France the schools may have been to some extent benefited, but to some extent they have been repressed, by their dependence on the university.

Secondary Instruction in the United States. We have before us the Report of the Commissioner of Education for 1872, and in it there is a table in regard to secondary institutions. The statistics are as good as the Bureau is in circumstances to supply; but they are acknowledged to be very imperfect. The report says that it is impossible to include the course of study pursued in these institutions, and declares that it cannot yet answer the question so often asked, "What ought they to do?" In one table the total number of Academies is 811; of Instructors, male and female, 4,501; of Students, male and female, 98,929. The number of pupils at first sight seems considerably large, but when we examine the record we find a result by no means flattering:

| BRANCHES PURSUED. | |
|----------------------------|--------|
| English | 33,624 |
| Classics | 8,517 |
| Modern Languages | 7,277 |

DESTINATION OF PUPILS.

| | |
|---|-------|
| To enter college | 3,444 |
| To enter scientific colleges | 992 |
| Who have entered colleges last academic year | 856 |
| Who have entered scientific schools last year | 316 |
| Total who have entered colleges, and scientific colleges and scientific schools | 5,772 |

It will be perceived that of the 98,929 pupils at the academies, 33,624 are classed as pursuing English; and we suspect that many of them are receiving no higher an education than is to be had at the best common schools. We have a record of only 8,517, males and females, learning the classical languages, that is, the languages that open to us the ancient world, with its literature and its history, and in particular the New Testament, which, not to speak of its Divine character, has had a greater influence on modern thought than all other books. It will be remembered that in Germany the whole of the 108,600 students in the Gymnasien are learning Latin and Greek, and that the 87,000 pupils in the Real Schule are learning Latin. It should be noticed farther that we have a return of only 3,444 preparing for college; of only 856 who have entered college during the previous year; and only 5,772 who have been sent to college by these institutions since their organization.

The Government Census gives a somewhat different report from that issued by the Bureau of Education. This discrepancy does not imply any error, or even any negligence on the part of the Census Commissioners or the Commissioner of Education. It merely manifests how imperfect the returns have been, or rather it shows how imperfect the organization of these schools is, and how difficult it is in regard to many of them to say whether they are primary or secondary, or half way between, or a mixture of the two. The Census gives 1,518 academies, or 707 more than have been reported to the Bureau, and makes the attendance 129,406, whereas the Bureau has heard of only 98,929. It is calculated that there are in America 2,455,000 persons, male and female, from the ages of 15 to 17 inclusive; and we have no evidence of more than 129,406 attending academies; and of these between a half and a third seem to be simply studying English, and a number of these; we fear, not taking the higher departments of English.

A considerable number of the institutions designated academies are boarding-schools. Let it be observed of them that they are not available to any but to the rich, who can afford to pay \$400, \$500, or \$600 a year for each of their children. Many of these establishments

are doing immeasurable good, are imparting a high intellectual education, with an excellent training, moral and religious. But they differ very much as to the instruction and the care taken of the morals of the pupils. Not a few of those who are at the head of these establishments have no higher ambition than to earn a livelihood for the present, and in the course of a few years to lay up a competency which may make them independent. I know of some that deserve to have done for them what Dickens did for Do-the-Boys Hall. At the private boarding-schools the principal is under no official inspection, and he is tempted to send home flattering and false reports to the parents, who are often too busy to make any searching inquiries. In too many cases the teacher feels that he can not send home a wicked boy who is corrupting half the school, but who belongs to an influential family, whose patronage is not to be thrown away. At a very large number of the institutions the teachers do not aim, or profess to aim, at producing high scholarship; they feel that they have accomplished all that they intend when they have prepared their pupils for the business of this world.

So far as we can judge from the statistics furnished by the Bureau, only a small proportion of the students entering the colleges, classical and scientific, are sent by the academies. We learn from one of the tables that there are 19,260 students in the collegiate courses, and when we compare this with the number of pupils at academies preparing to enter colleges, only 3,444, and when we consider that the academies can report only 5,772 as having been prepared by them for college, we see they are not the principal feeders of the colleges. The question arises, where have the great body of the 19,260 students been trained? The answer is, in a very varied way—a number in a nondescript way. A considerable number are, in fact, self-educated, having only had irregular lessons from a minister of religion interested in them; by a tutor picked up for the occasion, or a school-teacher at his unemployed hours. This shows how difficult it is in all States out of New England—where they have numerous academies and high schools—to have young men prepared to enter college, and how difficult it is for our colleges to raise their standard of entrance with out casting off able, deserving, and promising young men.

We have not been able to prepare such careful statistics as we expected as to high schools. Massachusetts here takes the lead. Her old Colonial law of 1647 required every town of one hundred families to support a high school, whose teacher should be "able to instruct youth so far as they may be fitted for the university. This

enactment laid the foundation of the greatness of the old Bay State. It was for a time somewhat in abeyance, but of late years vigorous attempts have been made to have it put in thorough operation. It is reported that during the past year 179 high schools have been maintained in 165 cities and towns. Only three towns required by law failed to maintain a high school. Many of these schools are not what might be expected from the name; still, even in the poorest of them, greater advantages are presented than could be offered by the other schools in the same town; and in many of the large cities and towns an education is afforded, without expense to the pupil, more extensive and complete than can be acquired in many colleges. Their influence, when they are wisely and liberally supported, is incalculable. From them our colleges receive their largest and often best supplies. From the high school at Woburn, a town having a population of less than 9,000, twenty graduated last June, five of whom were going to college. Including these five there were twenty-eight members of the school studying with reference to a collegiate education. Nine others, who were fitted at this school, were at that time in different colleges." Massachusetts owes much to her common schools, much to her universities, but it owes quite as much to her academies and high schools. These have seized the brightest youths in the elementary schools, and sent them on to the colleges, which have flourished in consequence. There are high schools sustained by State enactments in other New England States, and hence that portion of our country has been able to maintain in efficiency so many colleges.

We cannot find evidence of the other States of the Union being inclined to establish high schools. There are wide regions of America which have good colleges, but not, so far as we can discover, a single high school or academy worthy of the name, and the colleges are holding by a low standard of scholarship, and altogether in a languishing condition. It appears, however, that many of the cities are exerting themselves to establish high schools. We are able to present the statistics of the high schools in 326 cities, the aggregate population of which amounts to more than eight millions.

| | In towns above. | Towns above. | Towns under. | Total. |
|----------------------|-----------------|--------------|--------------|--------|
| High Schools | 168 | 89 | 98 | 355 |
| Teachers | 902 | 226 | 203 | 1,331 |
| Pupils | 22,970 | 5,975 | 5,036 | 83,982 |

It would be impossible for the acutest schoolman, skilled in defini-

tion, to construct a definition which will exactly characterize the branches taught in these schools. Latin and elementary science are taught in most of them, and in a number Greek to those who wish it. Some of them do little for colleges. We have seen it stated that the Cincinnati High School and the Chicago High School, each with an attendance between 400 and 600, send on an average from four to seven students to collegiate institutions. We find, however, that in the high schools there are reported 2,510 pupils preparing for college, and 687 for scientific schools. A number of boys begin their higher instruction in the high school, and then go on to some preparatory school to make them ready for college. The friends of education in America should devote all their energies, in their several States and cities, to have the number of these schools increased, and higher instruction imparted in them.

From this survey we may gather several important lessons as to secondary instruction in the United States.

1. The statistics we have of academies and high schools are very imperfect. The Bureau of Education ought to be encouraged in their efforts to keep the whole subject of secondary instruction before the public.

2. The secondary schools are not organized as in some other countries. This, no doubt, is an advantage, viewed under some aspects. It would be wrong to discourage private enterprise, and we find, in fact, that some of the best academies of the country are entirely managed by the teacher or a small body of trustees. Still much benefit would arise from having the public academies and high schools under some sort of organization; voluntary on the part of those which are supported by private endowment, and with a public inspection on the part of those which are under cities or States. This would give a unity with diversity to the teaching, and tend to elevate the inferior to the standard of the superior.

3. While a high order of instruction is given in some of the academies and high schools, in many the branches taught are far too limited, and the standard aimed at in them is much too low. The very discussion of the subject may help to remedy the evil, and may terminate in a more thorough organization. Though we are not in possession of full statistics as to upper schools, we have evidence that in respect of numbers they are not equal to the wants of the community. Wide regions, even in some of our most advanced States, are without a high school to give higher instruction to the middle and lower classes, and without an academy for the wealthy.

Parents write us from various places that they are not within hundreds of miles of any school fitted to prepare their sons for college, or give them any higher instruction than is to be had at the common schools.

4. The consequence of all this is, that there is a vast amount of talent lost to the country, in bright boys fitted to shine in the higher walks of life, in literature, in science, in statesmanship, and in the church, who are obliged to devote themselves to occupations which could be as well filled by inferior minds. We hold that the secondary school is the main means of calling forth talent in every country. It seizes the most promising boys at the primary schools, and sends them on to the college, or into the higher professions, where they have the means of distinguishing themselves and benefiting their country.

The question arises, what are we to do? We answer that we are first to seek to lead the friends of education to see that there is a want, and then the American public will find some way of meeting it. Two ways are open :

Private Endowments, provided by wealthy and generous individuals or by public-spirited associations. Much may be done in this way. But in order to do this there must be a new feeling created, pains must be taken by the press, and by persons of influence such as ministers of religion, to convince benevolent men that they can accomplish far more good by establishing a thoroughly equipped academy, giving instruction in varied departments of ancient and modern learning, than by setting up in the Eastern and Middle States a new college to weaken the other colleges, and bring down their standard of scholarship in the competition for students. It would be far more to the credit of a liberal man to have his name associated with academies such as Exeter or Andover, than to be handed down to posterity as the founder of some weakling college ever ready to die, called Smith's College, or Jones' Scientific Institute, or Robinson University. If such a spirit could be created and fostered, we believe that it might accomplish the work. But we despair of seeing such an inclination produced for many years, in this country, and meanwhile a whole generation will pass away, without the want being supplied. Besides, all such efforts would be sporadic, and in certain places we should have a plethora of such institutions, and an injurious competition—each denomination setting up its school ; while other and wide districts would be left destitute. We must therefore combine another method with this :

State and City Endowments. Many cities are already alive to

this method of elevating the rising generation. We are aware that there may be difficulties in persuading the States to establish such schools, but if the known friends of education will do their duty and press the need on public notice, we believe that there are States which could be induced to begin the new work. We know that religious difficulties may arise, but these same difficulties meet us in elementary schools, and the friends of religion must be prepared to meet them in the one case as they have done in the other.

At this point we venture to raise the question, what is to be done with the millions (some say ninety millions, others maintain that this is an exaggeration) of unappropriated land at the disposal of the General Government. An attempt was made last session of Congress to devote the whole or the half of the sum to be realized by the sale of these lands to what were called Agricultural Schools. The schools which expected to receive a share of the funds were employed for months in preparing and promoting their measure. Members of the Senate and of the House were anxious to be able to go back to their constituents with the assurance that they could bring down with them half a million of money or \$50,000 a year. Friends of education were glad to get the sum allocated to a good end, were it only to prevent it from being wasted in political jobbing. But there were the advocates of higher education, who when they learned that such a measure was quietly passing the House and Senate, set themselves courageously against the allocation of so large a sum of money to so narrow and sectional a purpose. They argued that so far as these schools were simply agricultural ones, they were not accomplishing so great a good as to entitle them to this large endowment. We could show that in no country in the world has agriculture been essentially promoted by agricultural schools. In Scotland where the farming is so excellent, it is promoted by Farmers' Associations with Magazines and Lectures, and not by special colleges. In Germany there are only six agricultural colleges, and we can testify from personal visitation that some of them are very feeble institutions. If a youth is bent on being a scientific farmer let him go to an institution for general science, with a chair of agriculture attached, and let him learn the art on the farm. We hold very resolutely that before so many millions be lavished on them, there should be a special inquiry into what these agricultural schools are, and what they are doing, with the number of *bona fide* agricultural pupils, and specially as to the number of those trained at so

large an expense who have thought it worth their while to turn to farming.

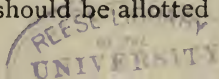
But then it was urged that many of the schools to be endowed are more than mere agricultural schools—they are schools of science, schools of technology. But this only raises other and perhaps more formidable objections. First, some of these schools have produced very few agricultural students; we do not know that Sheffield Scientific School has produced one. At the Teachers' Association at Elmira the head of a college beyond the Mississippi was declaring that the institution claiming the endowment was a flourishing one; but when asked to condescend on particulars, he showed he was a thoroughly honest man by allowing that the number of agricultural pupils was only two! But secondly, and more particularly, by allowing grants to certain scientific institutions and not to others, there is introduced a principle of partiality and therefore of positive injustice. It was dexterously provided that the allocations were to be reserved for those institutions which were so lucky as to *grab* a previous grant in 1862. We are prepared to show that the allocations of 1862 were not always made to the best institutions in the States, and that an additional grant to them would be an additional injustice. It is surely best for the country and for education to put all our competing scientific schools on the same footing. The excellences of Cornell University have been widely proclaimed and are well-known: and we find its president claiming that it graduated in agriculture two students and a half in June last!! and I ask why it should receive half a million (after having got a large sum before) while the other colleges in New York State, not so well-known, but striving to give as high an education, get nothing? The Senate of New York State decided that question last spring when it was brought before them by a vote of twenty-nine to one. Why should the Agricultural School at Amherst get so large a sum, and Amherst College, and other able colleges of Massachusetts, have no encouragement? We know that the Sheffield School is doing much good—though certainly not in the way of training agricultural pupils; but why should it get all and the other institutions of Connecticut be left to struggle without State aid? The College at New Brunswick is a good one, under the control of members of the Dutch Church, but why should it get so many thousands a year when its neighbor at Princeton connected with the Presbyterian Church receives nothing? Princeton we happen to know asks and wishes nothing, but claims a fair field and no favor, which it cannot have if its rivals are subsidized. When the

Government pampers one such institution in a State it does as much as within it lies, to weaken all kindred institutions, and is thus indirectly but powerfully hindering the cause which it professes to benefit. We are not foes to agricultural colleges, but we do not look on them as entitled to receive the last gift of land which the Government has to bestow.

We hold that the sum at the disposal of the Government should be allotted fairly, not to denominational colleges, and just as little to those which are as sectarian as any, since they exclude religion, but to institutions open to all, and giving instruction in branches in which not mere sections of the people, such as farmers, or engineers, or mariners (if these, why not carpenters or masons also?), but all classes of the people may receive profit. Another principle will, we hope, be attended to. We hold, with all the enlightened educationists of the world, that when public grants are voted for educational purposes, above what is given to elementary schools, they should be given to encourage the highest and not the lowest branches. There is profound wisdom in the recommendation of Mr. J. S. Mill :

"If we were asked for what end above all others endowed universities exist, or ought to exist, we should answer—To keep alive philosophy. This, too, is the ground on which, of late years, our own national endowments have chiefly been defended. To educate common minds for the common business of life, a public provision may be useful, but it is not indispensable: nor are there wanting arguments, not conclusive, yet of considerable strength, to show that it is undesirable. Whatever individual competition does at all, it commonly does best. All things in which the public are adequate judges of excellence, are best supplied where the stimulus of individual interest is the most active; and that is where pay is in proportion to exertion: not where pay is made sure in the first instance, and the only security for exertion is the superintendence of Government; far less where, as in the English universities, even that security has been successfully excluded. But there is an education of which it cannot be pretended that the public are competent judges; the education by which great minds are formed. To rear up minds with aspirations and faculties above the herd, capable of leading on their countrymen to greater achievements in virtue, intelligence, and social well-being; to do this, and likewise so to educate the leisured classes of the community generally, that they may participate as far as possible in the qualities of these superior spirits, and be prepared to appreciate them, and follow in their steps—these are purposes requiring institutions of education placed above dependence on the immediate pleasure of that very multitude whom they are designed to elevate. These are the ends for which endowed universities are desirable; they are those which endowed universities profess to aim at; and greater is their disgrace, if, having undertaken this task, and claiming credit for fulfilling it, they leave it unfulfilled."

We do not propose that any portion of the money derived from the unappropriated lands should be allotted to colleges. We cannot



aid all, and to select a few would be injurious. In regard to elementary education the Northern, the Middle, and the Western States are able and willing to do their duty. We venture to propose that in these the unappropriated lands be devoted to the encouragement of secondary instruction. Let each State get its share, and the money be handed over to it under certain rigid rules and restrictions to prevent the abuse of the public money. In particular, in order to secure that upper schools be endowed only where needed, we suggest that the funds be granted only when a district, or it may be a combination of two or more districts, has raised a certain portion, say one-half, of the necessary funds. By this proviso the money will be doubled, and may be made the means of stimulating the creation of high schools all over America. These schools would aid colleges far more powerfully than a direct grant to them; as in fact the grand difficulty which our colleges have to contend with arises from the paucity of schools fitted to prepare young men for them with their rising standard of scholarship. But we plead for these upper schools not merely as a means of feeding colleges, but as fitted to give a high education in varied branches, literary and scientific, to a far greater number of young men who do not intend to go to any higher institutions.*

These high schools, like the elementary schools, should be open to all children, the poor as well as the rich. They should be set up, like the German Gymnasien, in convenient localities, so that all the population may have access to them. They should embrace every useful branch suited to young men and women under sixteen or eighteen years of age, English Composition, English Language, History, Classics, Modern Languages, and Elementary Science. The best scholars in our primary schools would be drafted up to these

* Since writing the above we notice that Mr. Hoar has introduced a Bill into Congress, allotting the sum to be realized by the sale of the unappropriated lands to common school education in the various States—each State receiving according to the measure of the destitution of education within its bounds. We like this measure in so far as it will send a large sum to promote common education in the Southern States. Otherwise we have no partiality for it. Why should the lands in the West go to provide common schools in the Eastern and Middle States which ought to provide such schools for themselves? Better surely devote the last gift which the General Government may have to give, to raise up something which will not otherwise be supplied, and to meet a want felt in all the States. We confess to a deep fear that the money thus given to the States will be jobbed and wasted unless there be some self-acting check. The check that we propose is one often used in Europe—it is to require the States asking for a grant, to raise an equal sum. This will secure that the aid will be asked only where needed and that the distribution will be carefully looked after.

higher schools, and thus the young talent of the country would be turned to account, while the teachers in the common schools would be encouraged and elevated by the advancement of their pupils.

This for the Northern, Middle, and Western States. The plan might be modified for the Southern States, if they wish it. There is a want there, as every one knows, both of common schools and of high schools; and this both for the white and colored population. It is of no use denying this. Nor are we called to enter into the dispute as to whether the blame lies with the republican or democratic parties, with the whites or with the blacks. We proceed on the fact which will be acknowledged by all candid minds, that there is a lack of efficient schools over wide regions of the South. It is clear to us that unless steps are taken, and this immediately, to educate both classes, that the South cannot prosper, except in a few favorably situated cities, and that universal suffrage will turn out a universal evil, embittered by a war of races such as they have in Ireland, each race throwing the blame on the other. Now it has occurred to us that these unappropriated lands might be used so as to confer a great benefit on the South. In all kindness we propose that one-half the money allotted to Southern States should go, if the people wish it, to aid and encourage them in establishing common schools, and the other half reserved, as in the Northern States, for imparting a higher instruction to all who desire it.

We cannot close our Article without saying something about the highest educational institutions in the country—the colleges. We are prepared to testify from a pretty large acquaintance with both sides of the Atlantic, that to the great body of students the American colleges impart as high, and certainly as useful, an education as any European university: as Oxford or Cambridge; as Edinburgh and the Scottish colleges; as Dublin and the Queen's Colleges in Ireland; as Berlin and the great German universities, in all of which there are fully as many idle students, and fully as many graduating with a miserably defective scholarship, as in the American colleges. But it is quite as true that in the higher colleges of Europe they produce a select few, at most one-tenth of the whole, who have attained a riper scholarship, or a riper culture, or who leave college with a more fixed determination to do original work, literary or scientific. The grand question for the friends of American colleges to consider at present is, How may we retain all the excellences we have gained and add to them the special culture of the great European universities?

So far as we have noticed, the answer of the most enlightened educationalists in this country is: Elevate the standard of examination for entrance, raise the average age of entrants, and thus, it is said, you will secure a higher scholarship. But the question arises, Are we not in this way running the risk of losing some of the advantages of the American colleges, which have sent forth a greater number of well-educated young men, at a comparatively early age, into the professions and useful walks, than any other colleges except the Scotch? We do believe that in most of our colleges there should be a higher entrance examination. We maintain farther, and as more important, that the colleges should be made, by public opinion brought to bear upon them, to carry out their own professed standard. Surely there is pretension, in fact iniquity, involved in a college advertising a high standard in its catalogue in order to gain a character, and then paying no attention to it. Such a college should be made to feel that it is losing all character. But there is a limit to be set to this elevation of standard, especially in States in which there are few upper schools. We do not believe that it would be for the good of education so to raise the standard as to make it impossible or difficult to enter college till the candidate is eighteen or twenty years of age. For observe the necessary consequence: Young men would not be ready to begin even to learn their professions till they are twenty-two or twenty-four. Is this country ready to stand this? Is New York ready for it? Is Chicago ready for it? We believe such cities are ready to decide, and to proclaim aloud, "If such be your requirements we will not send our sons to you." Are parents, are pupils ready for it anywhere? Can young men afford to spend all this time before beginning even to learn the occupations by which they are to earn their sustenance? The average years of man's life upon earth are said to be between thirty and forty; is it right to spend twenty-two or twenty-four of these in preparation for learning, and then three or four years more in learning the business of life? Dr. Barnard thinks he has proven that the number of young men who go to our colleges, in proportion to the population, is diminishing. Is there not a risk of a greater diminution? But it is said that a boy is better at an academy till the age of eighteen or twenty than at a college. We dispute this. If our schools were what they should be, and were constrained so to be by public opinion, they might have a healthy young man ready for college by sixteen or seventeen; and one who has been all his previous life at a school, with its drill, needs about this time a change; and when he enters college, with its greater free-

dom, he has a new life imparted; and when he joins the junior class at the age of eighteen or nineteen, he has a still higher life evoked as he takes up the studies which require independent thought; and at the age of twenty or twenty-one, he is ready to set out to learn his profession ere his habits have become too stiff to master what is to be his occupation for life. We are sure that our merchants, our lawyers, our theological teachers, will tell you that they would rather have a pliable youth of twenty to instruct than a confirmed man of twenty-five, with his ways all settled.

How, then, it is asked, do you propose to gain the end you reckon so important? Observe what is the end: it is to have a few higher minds. We say a *few*, for we hold it to be impossible to make all students great scholars, great mathematicians, great metaphysicians. No college—certainly not Oxford, or Cambridge, or Berlin—has succeeded in this. Let us keep what we have got, and which is so good. Let us encourage the preparatory schools to send to our Freshman classes young men of the age of sixteen or seventeen. Let us give them there the four years wholesome instruction of the American colleges to make them all fair general scholars. In the Junior and in the Senior classes let us give them a choice of studies always along with obligatory studies. By this time the students themselves know, and their instructors know, who are fitted to be superior scholars. Let the ten per cent. or so, who have the taste and the talent go on to higher studies, to special studies—as no man in these times can be a universal scholar. Let him give himself for a time to philology, to philosophy, to social science, or original research in one or other of the various departments of physical science. Let encouragement be given to this by fellowships earned by competition, and held only by such as give evidence that they are devoting themselves to the special studies in which they stood the examination. We affirm confidently, that on such a system, you will in a few years add all the excellences of the European to those of the American colleges, and produce a select body of scholars fit to match the first wranglers of Cambridge, the double first of Oxford, or the doctors of philosophy and the doctors of science of the other European universities.

A host of important questions are here started, and press themselves on our attention, in regard to the teaching in our colleges. In the old method every student was required to go through the same course, in which were Latin, Greek, and Mathematics, from the first year to the last, and long before the end not a few felt that they were getting into depths in which they hopelessly sank among obscure

classical authors and perplexing analytical mathematics, and were tempted to resort to copying at the sessional examinations. New departments of learning put in their claims to a place in the college curriculum. The applicants turned out to be so numerous that they could not all be admitted without an exclusion of old studies. So there came to be a conflict for a time between the old and the new branches, and in some colleges the new were added while the old were retained, which laid a terrible pressure on the brain of the ardent student, and in the case of the great body ended in a superficial acquaintance with both the old and the new. The contest has ended in many colleges in a power of selection being allowed. We are prepared to defend this liberty as gratifying tastes which ought to be gratified, and securing scholarship in the branches for which the student has a taste. It is often a great relief to a student after he has gone through the discipline of the Freshman and Sophomore classes, to be allowed to go off the beaten tracks into paths chosen by himself. But this privilege should be kept within very stringent limits. First, students should not be allowed to make a choice till they are able to judge for themselves, which they cannot well be till they have mastered the fundamental branches of Greek, Latin, Mathematics and English, and this is beyond their power until the close of the Sophomore year. There is a tendency in some colleges, which wish to acquire a name for liberality, to allow the choice to be made too soon, and the student enters on a course of study, simply allured by the easy nature of the subject, or by a popular professor, or quite as commonly one who lets him off easily at the closing examination; and he has to regret his folly and blame his college all his life after, as he finds he has omitted solid to pursue showy studies. Then, secondly, certain fundamental branches should be required of all the students—all students, for example, ought to be obliged to study mental as well as physical science. It is only thus we can secure comprehensive knowledge and thorough mental discipline. In some colleges there is an intellectual dissipation allowed, the effects of which may not be seen at once, but which must exercise a fatal influence on the rising generation.

Another question has been started by the last report of the President of Harvard College, who inquires whether obligatory attendance upon "recitations, lectures, and religious exercises" might not be dispensed with in the case of at least the members of the Senior Class. Every one sees that if this is allowed to the Senior Class, it will soon be demanded by the Junior Class, and when granted to

them it must be allowed to the Sophomores, and in the end must become the rule of the college. This step is commended as being in accordance with the methods of the best European colleges. We are prepared to dispute this statement. In all the good colleges in Great Britain and Ireland the tendency of late years has been towards a weekly or even daily supervision of studies. In Germany, many of the most enlightened educators are ready to declare to Americans and to Britons that they feel the want of a power of exacting recitations to keep the younger students from idleness accompanied with beer-drinking and sword-duels. The question is: Is it right or expedient to allow students of sixteen or eighteen to go to college recitations or not as they choose? We may suppose that till they enter college they have been in a kind home or boarding-school, where they have been under salutary restraints. When first freed from these there is always a risk of their abusing their liberty. When they go into a lawyer's or a merchant's office the restraints are so far continued—they are required to be at their work certain hours each day. Should there not be like rules imposed on students as to their attendance at college exercises? Every body knows that many young men enter college without any appreciation of study; and the college should seek to give them a taste for learning, and this can best be done by requiring them to come into daily contact with kind and judicious instructors. It is only thus that temptations to idleness, not to say dissipation, can be counteracted in places where hundreds of young men of all sorts of dispositions and predilections are congregated. The attendance need not be *felt* to be compulsory any more than the attendance of a young man at a business office. It is a thing expected of him, and to which he willingly conforms, provided doubts are not put into his head by those "given to change." Our thinking students will rather rejoice that they are not left to circumstances and momentary impulses, but are required to attend to hours and periodically pressing duties. Of this we are sure, that wise and careful parents and guardians will be anxious to find colleges furnishing some security that their young men do not absent themselves for days, perhaps weeks, from college exercises, without any provision being made to check or even to notice it, or let parents know it. It is essentially a question for parents to settle. But the friends of education in general require to look to it. For another evil will inevitably follow. The instructors will content themselves, as they do in most institutions in which the attendance at recitations is not required, with giving lectures (many wish to be

troubled with nothing more), and will care little whether their pupils, with whom they have no intercommunion of thought, receive benefit or not. It is by a constant catechizing, after the manner of Socrates (and a greater than Socrates), that young men's powers are to be called into exercise, and knowledge implanted in their minds—as seeds are in the soil by ploughing and harrowing. At present it is not known whether the President of Harvard means to execute his plan. But it is not the less to be watched, lest some step be taken which cannot be retraced.

We have left ourselves too little space to discuss the most important, and yet the most difficult subject of all, the religion to be taught in the upper schools and colleges. Where the pupils live with parents or guardians there is no difficulty: those placed over them can see to their religious instruction; and the institution may secure that there be prayer for the Divine Blessing, and some catholic Bible teaching. But it is different where young men have been systematically separated from their guardians, and live by themselves, or in rooms in which there is no special care taken of them. In such institutions there is often a difficulty in knowing how to act. We here come to the subject which perplexes those who advocate state-endowed colleges. If religion is left out, there is an omission of the highest educating agency, and many parents will not send their boys, at the critical age, to places where their highest interest is neglected. If religion is made a mere sham, if an attempt is made to mix all colors, the result is a neutral hue, which has attractions to nobody, which has no influence for good, and may have an influence for evil by hypocritically professing to furnish what it has not to give. In all such cases the churches of Christ have a duty to discharge which they have not yet realized. They must do, what the Sunday-schools have done in regard to the elementary schools; they must supply the evident need, by securing in every college-town pastors fitted to give religious instruction to the students, and see that every youth comes up with a letter to one of the pastors. Without this, we shall have a body of ungodly young men issuing from our state-endowed colleges, more especially as in such colleges there is commonly a great prominence given to physical science by men inclined to materialism, and whose influence is not counteracted by any efficient or acceptable teaching in mental or moral science. If religious instruction be left out in such places, or what is more likely, given only in name, the consequences must be disastrous, and those who countenance these colleges must bear the responsibility.

Even in colleges which are denominational, there is a delicacy if not a difficulty in imparting religious lessons. On one point no difficulty occurs in colleges managed by evangelical bodies. It is understood that the instruction, while scriptural, should not be sectarian. Such is the independence, or if you will, the perverseness of youth, that denominational teaching, while it might gratify certain narrow spirits would rather have a tendency to turn away our finer minds from all religion. But there are scarcely any colleges in America, in which the teaching is in any proper sense sectarian. Still there is a difficulty in securing among a promiscuous body of young men, that religion have its proper place. We could easily give a recipe for making the great body of the brightest students in a college, doubters, infidels, or scoffers. It would not be by appointing skeptics as teachers—though this would of course have a bad influence—but it would be by bringing in a dull set of men as professors, chosen, not because of their learning, or their eminence in the departments they have to teach, but because they are orthodox ministers of religion, who may have failed as pastors, or are fit only to be popular preachers. Let these men in addition be narrow and censorious, let them be forever denouncing Pantheism, Materialism, Darwinism, and all sorts of heresies of which they know little, and we venture to predict that in a few years they will make the better half of the college doubters, or open skeptics. We know colleges both in the old world and the new, where zealous patrons have secured this end as effectively as if they had been in the pay of the enemy. Religion should be taught in our colleges by the ablest men in them, whose hearts as well as heads are in their work, who are full, not only of tolerance but of tenderness toward the difficulties of young men, and who draw them by argument, by truth and by love, instead of driving them away by threats and denunciations, which of all weapons are least likely to have any power with spirited and independent youths.

STUDY OF THE GREEK AND LATIN CLASSICS.

CHARLES ELLIOTT, D. D.

THE tendency in the minds of some to exalt the present by depreciating the past, has led to false views on many subjects. Among these may be included the study of the Ancient Classics. Carried away by some favorite pursuit, enthusiasts have advocated their removal from the course of a liberal education, and the substitution of some department of science which they conceive to be more in accordance with the advancement and spirit of the age. Others have found in them lessons dangerous to morality, and have expressed themselves as though they dreaded, from their use, the return of the ancient polytheism. Others, again, who look at the useful, have urged that their study has no tendency to fit a man for the practical duties of life; and have advocated not only the exclusion of the Greek and Latin Classics from a course of mental training, but every thing else, which does not have a direct practical bearing. *Practical*, with such men, means the conversion of every thing that they touch into gold; and because the Greek and Roman Classics do not point the way to wealth, they are doomed to oblivion.

These objections operate on many minds in the community, and damp the ardor of pursuit which many a generous youth would manifest, were he fully satisfied in regard to their utility.

The question of the utility of any branch of study depends upon the decision of the questions, What is the object of education? and by what means is that object effected? If it be shown that language lies at the basis of intellectual culture, it will be granted by every one not under the influence of prejudice, that the Latin and Greek have as just a claim as any other to be employed for the discipline of the mind in the department of philology.

It is not irrelevant, therefore, to inquire, at the beginning of our discussion, into the nature and object of education.

The word education is of Latin origin. The verb from which it is derived signifies, in that language, *to foster, maintain, bring up, nurture; hence, to instruct, train, form*.* We use the term in the secondary sense of instructing, training, forming. The word instruction is generally used to signify the imparting of knowledge, which is only a condition and means of education. The latter consists in training, forming. It is the harmonious development of the intellectual, moral, and physical powers of man. Its end is to fit him for the performance of the duties arising out of his various relations, to perfect his whole being.

The mention of man as an intellectual, moral, and physical being, presents to us a complex idea; and we can have no adequate conception of what education ought to be, unless we have some correct apprehension of that complex creature. What, then, is man, his constitution, his relations, and destiny?

Man is composed of soul and body. By means of his soul he is allied to the world of spirits; by means of his body, to the world of matter. The mind is endowed with faculties, which, in their exercise, obey certain laws: the body possesses functions, some of which perform the parts allotted to them without any volition on our part; others follow the dictates of the immaterial principle.

Without strict regard to metaphysical analysis, the faculties of the mind may be divided into the intellectual and moral faculties, and the faculty of taste. By the first, we apprehend the abstract relations of things, and the truth or falsehood of propositions; by the second, we discern the moral quality of actions, and derive the feeling of obligation; by the third, we appreciate the beauty and sublimity of art and of the material world. The body is the mere instrument of perception and action, while, at the same time, it forms the habitation of the spirit.

But our idea of man must be very defective, if we view him in an isolated capacity only, and contemplate his faculties and high endowments without reference to the great spiritual system of which he forms a part. As a member of such a system, he is a subject of moral law administered by the Legislator of the Universe. This law does not view him as an *autoteles*—a being whose end is himself—but as a being whose chief end is to glorify his Creator by the

* It is a mistake to derive the word education, as many do, from *educo, educere*, of the third conjugation. It comes from *educo, educare*, of the first.

highest cultivation and active employment of those mental and moral faculties with which he is so munificently endowed. It ought not to be his aim to secure the greatest happiness and wealth possible for the present term of existence, but to fit himself for that world of which this forms but the vestibule. This is his high destiny. In order to accomplish this destiny, things must not be estimated according to their present importance, but according to their influence on his future well-being. The question, in regard to any pursuit, should be, How will it best promote that well-being?—not, How will it advance him in wealth? Thus things would assume their proper positions and due relations.

The subject, then, to be educated, is a being of wide relations, and of a destiny high as the glory of the Highest. Education is the instrument by which this being is fitted for the performance of the duties arising out of his relations, and assimilated, in some degree, to his high-born and fair original.

But of education there are two kinds. The one is the education of habits and particular faculties; the other, the development of the whole man. The former has reference to some professional calling, and is mistaken by many for true education. So far is this from the truth, as a profound philologist has well remarked, the more a man is educated professionally, the less is he educated as a man. Unacquainted with almost every branch of study not immediately connected with his profession, the furniture of his mind is incomplete. It resembles a room with a beautiful finish and costly paintings on one wall, and with nothing but raw plaster on the other. The mental development of such a man has no harmony, no symmetry of parts.

True education, in its largest sense, is the development of the whole man, physical, intellectual, and moral. It does not consist in Spartan exercises to fit one for successful rivalry in field-games and for high achievements in battle. It does not consist in training the memory at the expense of the judgment, nor in cultivating the esthetic part of our nature to the neglect of the intellectual; nor does it admit of developing the intellect without an attempt at a corresponding development of the moral powers; but it consists in the training and culture of all these, in presenting in one glow of associated beauty all the faculties of body and soul.

In this development education can employ no one instrument. There must be a system of means based upon a correct and philosophical view of the work to be performed. This work, in mental

culture, is to teach the mind how to use its faculties, how to reason correctly on any subject proposed for its consideration.

The method of the mind in reasoning is twofold, analysis and synthesis, or induction and deduction. The relations out of which all science is made up are also twofold—law and observation. A law is a rule of unconditional truth arrived at by the generalization of facts. These facts become matters of knowledge by observation.

“When we reason from the facts to the law, we call it analysis, or induction; when we reason from law to law, when from a known truth we seek to establish an unknown truth, we call it deduction, or synthesis. As, then, all science is made up of law and observation, of the idea and the facts, so all scientific reasoning is either induction or deduction. It is not possible, however, to teach inductive reasoning, or even to cultivate a habit of it directly. We all reason inductively every moment of our lives, but to reason inductively for the purposes of science belongs only to those whose minds are so constituted that they can see the resemblances in things which other men think unlike; in short, to those who have powers of original combination, and whom we term men of genius. If, therefore, we can impart by teaching deductive habits, education will have done its utmost towards the discipline of the reasoning faculties. When we speak of laws and ideas, we must not be understood as wishing to imply any thing more than general terms arrived at by real classification. About these general terms and these alone is deductive reason conversant, so that the method of mind, which is the object of education, is nothing but the method of language. Hence, if there is any way of imparting to the mind deductive habits, it must be by teaching the method of language, and this discipline has in fact been adopted in all the more enlightened periods of the existence of man. It will be remembered, in this method of language, it is not the words, but the arrangement of them, which is the object of study, and thus the method of language is independent of the conventional significations of particular words: it is of no country and of no age, but is as universal as the general mind of man. For these reasons we assert that the method of language, one of the branches of philology, must always be, as it has been, the basis of education, or humanity as such, that is, of the discipline of the human mind.”*

Language, moreover, is the instrument of thought: it forms the medium of communication between one mind and another; it is important, then, that the instrument be skillfully handled, that the medium be clear and unobstructed as possible. But this can only be accomplished by a careful study of the nature and powers of the instrument itself.

All this may be admitted, and still it may be asked, What bearing has it upon the study of the Latin and Greek Classics? Why may not a modern language, such as the English, the German, or the French, accomplish all the ends of philological training?

* Donaldson's *New Cratylus*, pp. 7, 8, Cambridge.

A dead language, the phenomena of which are fixed, has a decided advantage over a living one, which is subject to perpetual change. Its permanence of form affords us better opportunities for philological anatomy, and for gaining fixed ideas of the general analogy of language. Of all dead languages, the Latin and the Greek, with the exception, perhaps, of the Sanscrit, have attained to the greatest perfection of grammatical structure, and to the highest degree of literary culture. No dead language possesses a literature so rich and varied as those of Greece and Rome. These, then, are sufficient reasons for choosing a language, or languages, which we find crystallized in symmetry and beauty, in preference to a living one, which is sometimes advancing, sometimes retrograding; which is modified by local customs, manners, tastes, and habits, and changes its form with the progress or revolutions of society.

It will scarcely be asked, why any other dead language, for example the Hebrew, against the literature of which exist no objections, may not be selected as well as the Latin and Greek. Apart from other reasons that might be assigned, the following is sufficient: The cultivated taste of all ages has preferred the Latin and the Greek, just as it has preferred the painting of Apelles and the statuary of Phidias and Praxiteles to the rude designs and clumsy execution of their barbarian neighbors. If any think this statement disparaging to a language which has preserved to us the writings of inspired poets and prophets, let them remember that the Greek was equally honored as the vehicle of apostolic teaching, and that both it and the Latin are as much the gift of God as the language of Moses.

Having shown that the study of philology lies at the basis of intellectual training, that a dead language is preferable for this purpose to a living one, and that among the dead languages the Greek and the Latin have superior claims, it will be necessary to show the particular manner in which the study of the Classics disciplines the mind, and that it can not, with advantage, be superseded by any thing else.

Suppose, then, a student with his Virgil or his Homer before him. What is the task proposed? It is manifestly, in the first place, to arrive at the meaning of his author. In doing this he makes himself acquainted with the significations of particular words. He next so arranges these words, according to their dependence and agreement, as to make a consistent sense. To do this successfully there is required the exercise of various faculties. Memory is

employed in remembering the significations of words ; comparison is exercised in observing their relations and agreement ; and judgment, in applying the principles of grammar. But the exercise does not end here. If the student is faithful, he will cultivate his taste in selecting the happiest and most appropriate expressions of his own language, in which to clothe the sense of the original : he will mark the differences of idiom, make himself acquainted with the geographical and historical facts connected with his subject, and inform himself with regard to every allusion to political, social, and domestic life. The study of the Classics, if properly pursued, is not the mere memorizing of words, declension of nouns, conjugation of verbs, and the application of rules for the agreement and government of words ; but it is the exercise of memory, reason, judgment, and taste. In separating sentences into their elementary parts, the mind goes through a process of analysis ; in combining these parts according to the principles of syntactical structure, recourse is had to the opposite process of synthesis ; and in thoroughly comprehending the subject, contribution is laid on almost every department of human knowledge.

A pertinent illustration of the point under consideration may be derived from the study of the English Classics. To understand Milton, for example, requires not only a thorough knowledge of the English language, but also of mythology, theological opinions, and many other subjects. When he speaks of that

“Crystalline sphere
Whose balance weigh’d the trepidation talk’d,”

he becomes altogether unintelligible to the reader, unless he have some knowledge of the Ptolemaic system of astronomy ; and without some acquaintance with the diseases of the eyes, obscurity must rest upon the passage in which, referring to his blindness, he says :

“So thick a drop serene hath quench’d their orbs,
Or dim suffusion veil’d.”

There is a higher exercise in studying the Ancient Classics than any which has yet been mentioned. In them we have some of the greatest productions of the human mind. The fountains of history, the wells of poesy, the highest efforts of oratory, the most subtle disquisitions of philosophy are there. They require, therefore, the application of logic and criticism. But to analyze the structure of arguments, to trace the affinities of thought, and to apply the principles of taste is the highest walk of mind, and all this a thorough

and comprehensive study of the Classics requires. The instances are very rare in which all this is fully done during a collegiate course. The most that we can expect to be accomplished there, is to lay the foundation for higher acquisitions.

The classical languages, as an instrument of intellectual development, can not, with advantage, be superseded by any thing else. No one has advocated the appropriation of more time to the study of the mental and moral sciences as an equivalent; for a proper understanding of these is so closely connected with a thorough knowledge of language that little progress can be made in them without it. The comparative merits of a living and a dead language have already been briefly alluded to: it only remains, therefore, to consider the propriety of substituting a more extended course of Mathematics, or of the Natural Sciences.

Let a more extensive course of Mathematics be substituted. In some respects, as an instrument of education, they are superior to the Classics. They accustom the student to patient attention, concentration of mind, and consecutive thought: they impart a habit of precision and logical deduction to a degree which nothing else can accomplish; but by carrying the pupil into the regions of cold abstraction, they chill the aspirations of fancy and fetter the play of the imagination. The reasoning employed in Mathematics, moreover, is not drawn from such a variety of sources as the reasoning required in the study of languages. The mathematician sets out with a few axioms and definitions, and his whole process consists in deducing ultimate or unknown truths from such as are obvious, or based upon previous demonstration. The principal faculties employed in such a process are memory, comparison, and judgment; and these are confined to a narrow, rigorously bounded field. Within that field they are trained to the eagle's quickness and penetration of vision.

The same may be said of the student of languages, who has his author, grammar, and dictionary. But in conducting their respective processes a great difference will be observed. The mathematician deals only with the relations of number and quantity: the student of languages deals with the significations of words, their relative position in a sentence, the selection of such terms as will best express the idea, with grammar, context, geography, history, and archæology. It will be readily perceived, therefore, that in the study of languages a greater variety of faculties will be called into exercise than in the study of mathematics; or that, at least, the same faculties will have a wider exercise

The demonstrative character of mathematical reasoning, which is one of its excellences, has not the happiest influence upon the mind of the mere mathematician, when moral subjects are presented for his consideration. Accustomed to his incontrovertible axioms, his exact definitions, and infallible conclusions, he looks for the same in moral questions. But they are not to be found; and if he does not turn skeptic, it can not be said that his mathematics saved him. On moral subjects, the student of language, other things being equal, has the advantage. All his reasoning in that department has been of the probable kind; and consequently he is better prepared to appreciate the evidence and reasoning employed in moral subjects.

To those who advocate the substitution of a more extended course of the Natural Sciences for the study of the Ancient Classics, the following considerations are submitted. They cannot accomplish their own purposes, together with those to be accomplished by the study of languages. Their relation to the mind is different; and it is important that every science should be considered in its relation to the mind, before the arrangement best fitted to develop the mental faculties can be determined. All science is in the mind, and its method is the same in every department; but each particular science has objects peculiar to itself, and differs from another, in its relation to the mind, according to the nature of its objects. The objects of Natural Science are the phenomena and laws of the material universe. To observe, collect, experiment upon, and classify these phenomena are the mental acts and processes employed in its pursuit. By such acts and processes inquisitiveness is awakened, the faculty of observation is cultivated, and habits of close attention are formed; but it seems to us that reflective habits are not cultivated to a corresponding degree. Where the external occupies so large a space in the mental vision, the internal must dwindle into comparatively small dimensions.

To form the mind to reflective habits and give it vigor and tone, it is necessary to throw it back upon itself, to observe its ever-varying phenomena, and to analyze its complex operations and emotions. Now these are found objectively in language.

"We find in the internal mechanism of language the exact counterpart of the mental phenomena, which writers on psychology have so carefully collected and classified. We find that the structure of human speech is the perfect image or reflex of what we know of the organization of the mind; the same description, the same arrangement of particulars, the same nomenclature would apply to both. and

we might turn a treatise on the philosophy of mind into one on the philosophy of language by merely supposing that every thing said in the former of the thoughts as subjective, is said again in the latter of the words as objective."*

The study of the Natural Sciences can not give the same kind of discipline only; but it can not give the same amount that the study of the Classics can.

These sciences may be taught in two ways, either systematically and in their full extent, or merely in outline and so as to convey some idea of their objects and leading principles. If they are taught in the former way, they are much too laborious as a mental discipline for the general student; if in the latter, they will have very little effect in cultivating the mind. On the contrary, in a majority of instances, they will lead to a dissipation of time and talents, unless pursued with other studies that require severer application.

It is not our intention to detract from the merit of the Physical Sciences. They form a noble study, well adapted to enlarge the mind and give it comprehensive views of the system of things. But it will scarcely be urged that the study of them can accomplish all their own ends, together with those of the study of language. And here it may be of importance to remark, that the experience of instructors generally has been that those students who have devoted themselves exclusively to the study of the Physical Sciences have made slower progress than those who have combined with them the study of the Classics. The remark has been attributed to Prof. Dugald Stewart, of the University of Edinburgh, that the most successful students in his department were those who had an accurate knowledge of the Latin and the Greek.

Some may plead the ennobling influence of Natural Science. In every department it displays the wisdom and goodness of the Creator. If studied with a right spirit, this is true. Yet, in Physical Science, the mind deals with matter alone, its properties and laws. In the Classics we can read the lessons of Divine Providence. We can hold communion with the spirits of the mighty dead, stand with Demosthenes on the Bema at the Pnyx, walk the groves of the Academy with the celebrated philosophers of antiquity, follow Cicero into the Senate and listen to his soul-stirring eloquence, and thus form a sympathy with mankind. And this sympathy who would exchange for all the emotions which the beautiful and sublime in nature can produce? In the words of a Latin dramatist:

"*Humani nihil a me alienum puto.*"

* Donaldson's *New Cratylus*, p. 44, Cambridge.

The judgment of the most cultivated nations of modern times has been and is still in conformity with the views that have been expressed. The study of the Greek and Roman Classics was introduced into the system of liberal education which was adopted at the restoration of learning in Europe; and the experience of its benefits has secured its continuance. The Classics of Greece and Rome were included, in the schools, colleges, and universities of modern Europe, among those branches of study which they termed the "*humanities*," or "*literæ humaniores*;" and in the Scotch universities the professor of Latin is still styled "Professor of Humanity." This appellation is a proof that the founders of the modern system of education considered the classical writers as the teachers of the civilized world. They form a common bond, which unites the cultivated minds of all nations and ages together.

Some have condemned the study of the Classics on the ground of morality. It is not our purpose to hold them up as models of moral teaching, or to encourage an indiscriminate imitation of the sages of antiquity. Even under the benign, elevating, and sanctifying influences of Christianity, human virtue is too often found of a defective, weak, and stunted growth: how much more may we expect this to have been the case among those "who changed the glory of the incorruptible God into an image made like to corruptible man, and to birds, and four-footed beasts, and creeping things!" The only pure morality is found in the pages of inspiration: the only perfect model of virtue in the Founder of Christianity; and next to Him, in those who believe His doctrines, obey His precepts, and imitate His example. Yet among some of the ancient heathen there was much that was noble and elevated in character. We meet every where on the classic page with examples of devoted friendship, filial piety, reverence for the gods, unbending fidelity, self-sacrificing patriotism, and magnanimity. These virtues are commended and their opposites condemned. This demonstrates to us the supremacy of conscience and the universality of moral distinctions. It is known by all who have paid any attention to moral science, that a variety of opinions has existed concerning the theory of conscience—some holding the doctrine that it is a part of our original constitution, and others that it is the result of education. Now, to a careful reader of the Classics nothing is more obvious than the use of terms expressive of moral distinctions—distinctions founded, not upon legislation nor upon established custom, but referring to something absolute and immutable above and beyond man. They perceived these distinctions

and felt and obeyed the impulses of conscience, though at variance with the examples of the deities whom they worshiped. Their gods were monsters of wickedness; but vice, armed with their authority, "found in the heart of man a moral instinct to repel her. The continence of Xenocrates was admired by those who celebrated the debaucheries of Jupiter. The chaste Lucretia adored the unchaste Venus." These examples afford an illustration of the following passage, written by an inspired apostle: "For when the Gentiles, which have not the law, do by nature the things contained in the law, these having not the law are a law unto themselves, which show the work of the law written in their hearts."

The best method of teaching youth morality, is not by arguments, rules, and demonstrations, but by examples, by sentiments that ennoble and elevate the heart. Such examples, we have already stated, are to be found in the Classics. Socrates was patient and forbearing, ardently devoted to the best interests of his fellow-men, according to the light he enjoyed; Xenophon was an example of modesty; and Plato, who acquired the epithet divine, displayed as much humility as many of his philosophic successors. Among the Romans, we have the simple republican manners of Cincinnatus, the unshaken constancy of Fabricius, the self-denying patriotism of Regulus, and the stern virtue of Cato denouncing the luxury and stemming the corruption of his age. These examples come down to us venerable by their antiquity, and on that account more efficacious. The examples of virtue among the moderns are so near to us and so much more familiar, that we are liable to look upon them in connection with their vices. Examples, that are constantly occurring around us, may be equally brilliant; but, like the light of the sun, which immediately surrounds us, they are obscured by floating dust, whereas, if we look to a distance, the particles of dust disappear, and we see, or we imagine that we see, the pure, unadulterated beam. Here, as in natural scenery, "distance lends enchantment to the view."

From examples it would be interesting to turn to the moral precepts transmitted to us in the Classics—precepts referring to civil, social, and religious duties. But we will omit these for the consideration of a more important point, at least a point of greater practical importance to the present age.

Classical studies furnish an antidote against the materialistic and materializing philosophy of the present day, promoted by a too exclusive devotion to the Natural Sciences, and thus indirectly aid

the cause of morality and religion. Certain scientists are loud in their demand for *things* instead of *words*, as if words, and the ideas which they represent, were not things, and the most permanent things. The temples and sphinxes of Egypt are dumb, and leave us in ignorance of the past; but her hieroglyphics speak: her recorded words are the expositors of her antiquities.

This materialistic philosophy sees nothing practical nor useful, except in ores and metals, cubes and squares, gases and imponderable agents. It has a good representative in

"Mammon, the least erected spirit that fell
From heaven: for even in heaven his looks and thoughts
Were always downwards bent; admiring more
The riches of heaven's pavement, trodden gold,
Than aught divine or holy else, enjoy'd
In vision beatific."

And with great skill does the poet make him the leader of the fallen angels to "a hill" from which they "digg'd out ribs of gold."

Low utilitarianism is always thinking about digging gold; and it would convert every thing into a spade or pickax for that purpose. Such a one-sided and groveling philosophy must be opposed by one more comprehensive, elevated, and spiritual; and one of the best auxiliaries to such a philosophy is a broad classical culture. Men must be taught that whatever awakens noble thoughts and influences the heart for good is useful and practical; that the most necessary branches of knowledge are not, on that account, the most intrinsically valuable. Iron is used in a greater variety of ways than gold: it is more useful, but does not have more intrinsic value. Cotton is more generally used than silk: it is more useful, but it is not more valuable. Charcoal is more in demand than diamonds; but diamonds are more precious. We live in a world in which labor is required to feed and clothe ourselves, and for this purpose acquaintance with certain branches of science is necessary; but those branches, though of necessity more generally studied than others, are not higher in the scale of dignity: they are not of more intrinsic value. Arithmetic is not higher than Calculus; Geography than Astronomy; nor Chemistry than Metaphysics and Moral Philosophy. House-and-sign painting is not equal in dignity to landscape painting; nor is the study of Botany so elevated a walk of mind as that of language or poetry. Every one, of course, can not be expected to study Latin and Greek, the higher Mathematics and Metaphysics, literary criticism and poetry; but they are not, on that account, to be considered

useless and unworthy of the attention of the human mind ; and it must not be imagined that other things, that relate more immediately to our present wants, can be substituted for them, and equally accomplish the same ends. This is the fanatical raving of a shortsighted, purblind philosophy, which can see neither beauty nor excellence in any thing that lies beyond the narrow circle that it has marked out for itself. Its views are all directed to some particular result, and with such intensity that it can see nothing else. It is wedded to a single idea, and all other ideas are discarded, out of respect to its favorite one.

The devotees of such a philosophy say, with Bacon, we want fruit : the object of all philosophy is fruit. Bacon did not mean, by fruit, crab-apples alone, nor pears nor peaches alone ; but he meant all the rich variety that nature yields. Without figure, he meant all the legitimate results of literary research and intellectual investigation : he meant the fruit which our intellectual faculties are designed to produce. In the estimation of that philosopher, the Bread-and-Butter Sciences, as they are styled by the Germans, are not the only useful sciences. “ Man doth not live by bread only.”

Vivere

Non esse solum vesci aethere,
Sed laude virtutisque fructu
Egregiam satiare mentem.

THE UNIVERSITY SYSTEM IN ITALY.

SINCE, after five hundred years of silence in his tomb at Arqua, the spirit of the most distinguished man of the fourteenth century is revived in these glorious days of Italian history, it is proper to begin this brief study with the name of Francisco Petrarch, who, for being the precursor of modern civilization, and having risen superior to medieval prejudices, deserves to be called the foremost genius of modern times.

He studied law at Montpellier and at the University of Bologna; and while yet a student, his penetrating genius had detected the ease with which doctors' degrees were at that time won and conferred. In one of his juvenile letters, he writes :

"A young blockhead arrives at the sanctuary of learning; his masters praise and magnify him; his parents and friends applaud him. He receives his degree, ascends the rostrum, immediately looks down with contempt on all beneath him, and murmurs confusedly to himself, I know not what. Then the seniors laud him to the skies, as if he had spoken divinely; and amid the ringing of bells and the blowing of trumpets, the youth is embraced, and invested with the round black cap. At the conclusion of this ceremony, he who ascends the rostrum a fool, descends it a wise man; a miraculous metamorphosis which even Ovid could scarcely have imagined."*

We are not a little mortified in being obliged to acknowledge that, after the lapse of five centuries and a half since this just satire was written, the majority of doctors continue to be created in a like manner. That which is lacking in very young countries, and which is a great incentive for good, namely, a glorious past, is in Italy entirely superseded by prejudices. The Italians of the present day undoubtedly feel the necessity for progress, and moreover, exert themselves occasionally to infuse some new life into their universities, but even they attribute their faults to their origin. They were born of the Middle Ages, and therefore to the Middle Ages belong all their imperfect and vicious ordinances. When in the midst of the gloom of medieval barbarism, the universities and the convents were the only footholds of civilization which remained, they at one time certainly

* Petrarch. *Epist. Famil.*, i., 6.

rendered immense services; *in regno cæcorum monoculus est rex*; but now that all can see, or rather, since all have their eyes wide open, the one-eyed class have a position entirely opposed to that they formerly occupied, and instead of pointing out the way to others, stand in need of guidance themselves. The Italian universities were once the guardians of the past, and the precursors of the future civilization; and an imposing homage to their civil power was paid them in the Diet of Roncaglia, by the terrible Emperor Frederick Barbarossa, when, being able as he was to solve difficult questions by the sword, in the manner of Alexander of Macedon, he submitted them to the wisdom of four famous doctors of the College of Bologna, because, with the authority of the Roman laws, they could decide those questions pending between the German Emperor and the Italian cities. It was evident that the university then possessed a supreme authority, by which it had the power of intervention in, and the regulation of, the affairs of the state; hence it comes that the Rector Magnificus of the University is enabled to occupy, by right, the highest position after the prince, and is regarded by the nobility as their equal. The university exercised great power in affairs of state, as the true oracle of civil wisdom, but in the diffusion of that light which in a measure was part of itself, it remained almost immovable; the instruction of Scholasticism was continued in the universities, long after Scholasticism itself had passed away, abolished by the Humanists of the Renaissance; and now that criticism has forever overthrown their old and worm eaten structures, Scholastics and Humanists alike congregate within the same walls.

While every thing else in Italy is making rapid progress, the universities alone are backward; now and then we find good preceptors, who comprehend the necessity of infusing into their instruction something of the spirit of the time; but as a rule, Italian educational institutions still continue to present a character of venerable immobility, which is little in conformity with the duties devolving upon them in the advancement of learning. Many of the Italian universities have really out lived their day. Yet woe to that courageous minister of public instruction who dares to menace their existence. It is often remarked that our universities are too numerous for our requirements, and the necessity of supporting so many, entails more disadvantages than can be here enumerated. The pecuniary circumstances of the professors by no means correspond to their rank, and provision must therefore be made for them all. It is universally acknowledged that this is true, that a reform is neces-

sary, and that some of the universities of the second class should accordingly be sacrificed. But the instant one is suggested, the question becomes involved; the passions are aroused; the government is assailed; lamentations increase to jeremiads over the ruin which threatens the province in the loss of her university, and a petty provincial revolution seems imminent at the bare proposal to suppress a university rendered famous by so many glorious traditions. Then follows a display of the names of illustrious professors who in the last century occupied chairs in that very college, as if the renown of its former gifted faculty must necessarily overbalance the mediocrity of the one at present in office. And when public opinion, which is first to be persuaded of the necessity for reducing the number of universities, sees all these names paraded in this conspicuous manner, it wavers from its conviction, and joins its voice to the lamentations, thereby increasing the difficulties the government already has to contend with, among which—a serious impediment to suppression—is the settlement of the accounts with the provinces after it has been accomplished. Several of these universities have been endowed through ancient legacies and privileges; and when the economical conditions of life in Europe were less complex, and before science had been divided and subdivided into so many special departments requiring special professors, these endowments were of sufficient importance to attract to the universities illustrious men who gave them the prestige of their genius. But few professors were needed, and these few were frequently selected from other countries, since, as is the custom in Germany and America, the inducement of a good salary was not wanting. At the present day, on the contrary, the ancient endowments are insufficient to provide for all the requirements of modern collegiate instruction. What is the result? If the government suppress these universities, it must of course indemnify the province by the restitution of the endowments which formerly supported them, thereby disturbing the entire economy of its own administration, already regulated, with a few exceptions, according to a fixed rule. An equalizing system of endowment is therefore established throughout the kingdom, while to each university outside of the common fund, an undeviating annuity is paid, and in this distribution the smaller universities naturally feel themselves sacrificed. Some of them have the title alone remaining, since, instead of grasping the universality of science, they only contain one or two, or at the most three scientific faculties; the most limited number of chairs, and still fewer professors. Therefore, by dividing the Italian univer-

sities into two categories, or rather into the first and second class, to which may be added several belonging to the third order of merit, as for example that of Sassari in Sardinia, we see that at those of the second and third class, where the professors are paid by a much lower tariff than those connected with the first, they are forced to remain the sole instructors, who are without ambition, because sensible of the impossibility of its realization.

We have made use of the word tariff, and the expression is not inappropriate, since it describes the stated stipends given to the preceptors in the university schools. We will remark, to begin with, that the stipend by no means corresponds to the dignity and importance of the duties belonging to a university professor. In the Italian universities, where the system of private instruction of the Germans has not yet been introduced, and if it were would fail, salaries are alone given to the three following classes of official instructors: First, the temporary professors, (*incaricati*); second, those classed as extraordinary (*straordinarii*); and third, those classed as ordinary (*ordinarii*). Those belonging to the first denomination do not regularly enter the university career; they are paid by the course, on the termination of which they are dismissed without any claim to pension or promotion. The professor extraordinary is a lecturer who enters the university career to remain there; he is, nevertheless, subject to removal, being transferred from one university to another, according to the pleasure of the Minister of Public Instruction.

Young professors are generally classed as extraordinary; if the professor distinguishes himself, he attains the degree of ordinary; if not, he remains a professor extraordinary for life. The professor in ordinary is not subject to removal; but having once arrived at this supreme dignity in the university career, however industrious, however illustrious, however superior to all his colleagues, he may subsequently prove himself to be, he can hope for no greater distinction, no higher promotion, no better remuneration. All the professors in ordinary attached to the first class of Italian universities, have a stipend that would cause our honorable American colleagues to smile; it is *five thousand francs* a year, of which the government retains a thirteenth part, in payment of the tax upon movable property, and as much again for the pension which they are to receive if they have the good fortune to attain old age. And they may well smile, because we are forced to do the same against our will, when we reflect that he receives less compensation than the heads of the ministerial bureaus, who have arrived at that pasha-like dignity by

having the patience to go on occupying for many consecutive years, the same seat at the same table. The professors in ordinary are all placed in Italy upon the same footing; in case a perfect fraternity did not exist between them, they could console themselves with a perfect equality.

Constitutional Italy has wished to level all intelligence, to measure it by one set rule, weigh it in the same scales, and to give all its labors the same recognition. What is the consequence? The man who has a real enthusiasm for education and science, certainly does not allow himself to stop at questions of profit where his own progress and that of others is concerned. This is his natural and all-powerful tendency; and in whatever condition of life, whether prosperous or the reverse, he is always found faithful to his vocation. But such men are rare, and form exceptions to the rule. The majority are stimulated in their labors by personal interests, and hence it is that we see a large proportion of our professors who work unceasingly to attain the rank of extraordinary, with the view of ameliorating their position, and of eventually being classed as *ordinarii*. This desired goal once reached, the impossibility of aspiring to any thing higher in the future seconds their natural inertia, and beyond their simple obligatory routine of instruction, reduced to a species of mechanical exercise, they neither do, nor attempt to do any thing for the advancement of education, or the progress of science. There are others, on the contrary, more active by nature, who find that they are not able by teaching alone to provide for the needs of their families, while more remunerative occupations are open to them; and although they would willingly devote all their attention to its advancement, they are nevertheless constrained to look outside of the university for their support; thus often wasting their precious activity in pursuits by no means scientific, which in a short time exhaust the intellectual forces. The young men who resort to the universities to pursue a course of study, naturally resent this state of things; often finding the professors dissatisfied; but slight interest manifested in their instruction, and small efforts made to inspire them with a love of learning; all which, added to other drawbacks in our bad university system, are certainly serious evils. Moreover, as we have already observed, the universities in Italy are by far too numerous. The single island of Sardinia possesses two, those of Cagliari and Sassari; the island of Sicily three, Palermo, Messina, and Catania; Tuscany three, the Institute of Superior Studies, at Florence, the University of Pisa, and the University of Siena; Naples one; Rome one; Umbria one, Perugia; the Marches

two, Macerata and Camerino ; Romagna two, Bologna and Ferrara ; Emilia two, Modena and Parma ; Venetia one, Padua ; Lombardy two, the Scientific and Literary Academy at Milan, the University of Pavia ; Piedmont one, Turin ; and Liguria one, Genoa. Here we have twenty-two universities, not taking into account the high, polytechnic, commercial, industrial, agricultural, and military schools, the Institute of Application for mechanics, and other special institutions, which, as may be supposed, necessarily represent a large scientific interest, and which extract a considerable sum from the public treasury. The external apparatus of the university system of education in Italy is, as we see, pretentious and imposing, but, as is often the case when such an elaborate display is presented to our view, we are constrained nevertheless to suggest with a sigh : *sed cerebrum non habet*. Is it possible for Italy in her present economical and intellectual condition, to support twenty-two universities in such a manner as to render them all prosperous ? Yet, supposing that she had but half of them to maintain with dignity in the matter of the emoluments of the professors, would it be possible to find in Italy at the present day, the number of able professors requisite for so many universities ? Whatever faith we may have in the increasing progress of our country, we do not deceive ourselves in order to believe in it. It certainly appears to us that, provided the instructors were placed in better circumstances, we should see less frequent desertions from the universities to the parliament, where, although the deputy is not salaried, the way to honor and promotion lies open before him, and thus it pains us to see so many men renowned in science and letters, abandoning their chosen paths in which they have acquired fame, if nothing else, in order to throw themselves into the ardent struggle of politics, in which the good name they have won is soon lost. But even if all the men in Italy most fitted to elevate the dignity of superior instruction should wholly devote themselves to it, sufficient reason for the maintenance of so many universities in existence would still be lacking. The quantity must necessarily influence the quality ; and even if Italy could boast of the degree of culture upon which Germany is to be congratulated, and from which we are as yet very far removed, it would fail to justify such a lavish supply of universities, all costing perhaps more than they are ever likely to render back. We can understand that at the time when every little Italian city was the proud capital of a flourishing state, it wished and could have the ornament of its own atheneum, and sought to rival the neighboring capital, not alone in the glory of its arms, but also in that of its learning.

And we can also understand, for example, how the republican academies (as they were called) of Pisa and Siena strove to rival that of Florence. These were three distinct states at war with each other, and it would have been a disgraceful thing for a Pisan or Siennese citizen to send his son to study in a city like Florence, with which they were in hostile relations. But at the present day, this motive for division being no longer in existence; if Tuscany possessed one flourishing university, it would not be thought insufficient for that little province, and there would instead be cause for congratulation in being able to see collected in one such institution the best and most gifted professors, who are now devoting their energies to the instruction of a necessarily limited number of students at each of the three universities of Pisa, Siena, and Florence.

It is doubtful whether the time will ever come when we shall see this desired consummation, but it seems certain that no university in Tuscany can really prosper, until the three which are at present so inadequate to the requirements of the time are incorporated in one more active and efficient. In the Neapolitan provinces, for a population of about six millions, they have one university only, and no one will be found bemoaning its insufficiency; on the contrary, universal testimony will be given to the prestige education receives in a university like that of Naples, which within a few years past, has been attended by nearly ten thousand students, although not all regularly inscribed as candidates for the title of doctor, and the rights of a profession. Another vice of our university system is, that the adoption of the title of doctor comprises also the right to practice the profession to which it belongs; so that he who takes his degree in medicine to-day, becomes a physician on the morrow; he who receives his degree in the law, has the right—after three years of practice, as it is called, but which in reality is nothing more than having simply been present in a lawyer's office—to pursue the legal profession. He who takes his degree in philosophy and philology, is entitled to establish himself at once as a professor in an academy or lyceum. Thus the Italian university, which is, properly speaking, neither a high scientific school nor an especially high professional one, arrogates to itself the double privilege of nominating the scientific doctors, and of giving the diplomas for the various professions. Hence arises the great evil of allowing students to issue from the universities without thorough scientific training and without experience; they receive instead a hybrid education, which aims to combine the two things, and which results in damage to both. Students run through the university

course as some statesmen pursue their administrative career ; with the lapse of time they pass from rank to rank, till, all intervening grades and years having been passed through, they finally arrive at the wished-for title with its corresponding employment. We deplore the fact that such an artificial and mechanical method of creating doctors, so unworthy of commendation in any particular, should still be in practice among us.

As we have before remarked, there are in several Italian universities, noble and energetic workers, who are capable of introducing more rational and practicable methods ; but these are exceptions, and when the majority continue for the most part to do as they have always done, not caring whether it be good or evil, and remain content to walk in the beaten path, the efforts of a few individuals can produce but little effect in a generally vitiated system ; vitiated in its scholastic traditions, in its intentions, and in its association with the inferior institutions, which furnish the universities with the elements upon which they work. The provisions made in these years of liberal thought in Italy, and the new element introduced into the universities, have at least rendered the defects of the old system perceptible, but its abolition will not alone suffice, and the Italian university will never enjoy a prosperous vitality till it is entirely transformed in accordance with the necessities of the time.

In the past, a certain fame of erudition was sufficient in order to secure the good graces of the prince, and to obtain a chair in the university ; as to the teaching, the more antiquated and soporific it was, the more pleasing it was to the prince. The professor, upon ascending the rostrum, assumed the traditional toga ; spoke in measured magisterial tones while expounding the principles of science with oracular gravity, and the more hard working of the scholars, who collected faithfully and repeated the words of the imperious master, were designated as distinguished ; they were preferred and privileged ; and all entertained the hope that if they devoted themselves to the educational career, they might one day be able to succeed the said master, to adopt in their turn the authoritative tone and the same magisterial pomposity. To this is added in several universities by way of prestige, the custom of conducting the lectures in the Latin language, as if to conceal the poverty of ideas beneath the weight of words. We do not refer now to the remote past ; before the year 1848, several physicians and lawyers still lectured in Latin in the university of Turin ; where at the present day the use of Latin as a medium of instruction belongs to Prof. Tom-

maso Vallauri, whose professorship is known as that of Latin Eloquence. The title alone of this professorship gives us an idea of the quality of the instruction, as that of the corresponding chair of Italian Eloquence shows us what was understood by Italian until within a few years, at the University of Turin. While to-day the same chairs are known as those of Latin Literature and Italian Literature; the word Literature, now comprising philology, literary history, and esthetics, was formerly applied to eloquence alone, and when the incumbent of the professorship had delivered his speech with oratorical excellence, it was sufficient, and no one demanded an account of what he had said. In like manner the teaching of history was reduced, in some of the universities, to the mere exposition of those salient facts best adapted for rhetorical narration, and most likely to impress the listeners with an exalted idea of the grandeur of the reigning dynasty. In philosophy, the graduates from San Tommaso ran great risks of passing for heretics. To the physical sciences alone, since they are subjected to practical experiments and not to oral demonstration, no scholastic rule is affixed; and for this reason, in the general poverty of the other academic studies, the physical investigations made by university professors will lead, without doubt, to many important discoveries. The individual instruction is already partly renovated, and partly in course of renovation, so that many of the evils we still deplore, proceeding from the prejudices of that class of teachers who yet remain wedded to their old rhetorical and scholastic systems, will soon cease, owing to the difficulty the new professors encounter in following in the tracks of their predecessors.

Every year shows us a perceptible amelioration in this respect, and it is to be hoped that in twenty years no traces will be left in our universities of the pedantic instruction of which we are to-day the witnesses. The method alone by which professors are now elected authorizes great hopes for the future. The proceedings are more constitutional; a larger number of persons participate in the nominations, and there is therefore a broader and more liberal regimen. We do not infer that the present method has not numerous drawbacks, chief of which appears to us to be the division of the responsibility among so many that no one assumes his proper share. Consequently it often happens that nominations are indorsed which no one alone would dare to propose. In the majority of nominations to university professorships, the proceedings are as follows: When a chair is left vacant in a faculty, and is to be filled, the Minister of Public Instruction invites the faculty itself to assemble for the purpose of proposing

and recommending its candidate. The faculty convene; discussions and consultations follow, and their proposal is then referred to the Supreme Council of Public Instruction, composed of twenty professors, or men of science and letters, delegated by the government for the purpose. The council then nominates a commission from among its members; this commission makes an examination of the claims of the candidate and the proposal of the faculty, the result of which is then referred to the council, by whom the matter is put to vote. If the candidate obtains the majority, the minister confirms the nomination and causes the degree to be prepared, which, after being signed by the king and approved by the parliament, is sent to the chosen candidate. This is at present the most regular and frequent method of nomination; but exceptions are occasionally permitted. The minister sometimes proposes his own candidate to the faculty, or transmits his claims directly to the Supreme Council, in this way making the examinations and nominations without consulting the faculty; but as a rule the initiative is voluntarily left to them, with whom the acceptance or non-acceptance of a professor often depends upon the degree of authority its presiding officer exerts over the rest of his colleagues. The latter, out of deference to their president, not infrequently allow him to act in accordance with his own judgment, which may or may not always be correct or disinterested, in choosing the new professor in the name of the faculty, which is excused for its inertia and indifference, since this inertia and indifference can be in part justified. With us the faculties of the universities have by no means the same power which is given to them in Germany. The university council is not a vital force, which is active in taking the initiative. It continues to exist because it is the wish of the government, and because it is decreed that it shall assemble once a month, which requirement is often overlooked; but not because there is not sufficient for it to do in the arrangement of the little bureaucratic affairs, relative to the study hours, the examinations, and the discipline, which its province is to regulate, but which it now leaves for the chancellor of the faculty to attend to, even as other important duties are allowed to devolve upon its president. We might give many causes for this laxity, but the two principal are undoubtedly these: first, the slight amount of confidence we place in the institutions of which we ourselves form a part, and which we should in every way seek to render worthy of reliance; and second—and this is an evil much more difficult to overcome—our lack of social intercourse by which we are led to distrust every thing done in common, and which leads us

to disdain all communion of ideas, as if fearing that in the contact with the individuality of others, our own must necessarily be sacrificed. Therefore it happens that in wishing too much for all, we renounce that portion of our rights which belongs to each of us separately, preferring to do nothing, and to let one person act for all according to his own pleasure, rather than work in unison, where personal renown and advantage would unavoidably be somewhat subordinated. It is one of our old failings which we are beginning to acknowledge, but not as yet to correct. We trust that time may render us more tractable, and less reserved among ourselves. Individual forces may be admirable, but their union would result in great and permanent advantages. The faculties of our universities may be undisciplined and apathetic, but they are perfectly capable of being vitalized. And the first sign of vitality should be that of taking measures for a thorough transformation of the present university system. They alone have the power and authority requisite for the task; and whenever they are willing to put themselves in accord with each other, the better to study the necessary reforms, to determine what they shall be, and to put them in practice, our universities will accomplish wonders.

But who will ever have the power to infuse into them this energy and courage? Under the present system the university is too widely estranged from our every-day life, and too indifferent to it. Where vital force should be most felt, it is wholly lacking. Students enter the universities, and issue therefrom, in much the same manner as did the Prophet Jonah enter and come forth from the gloomy recesses of the whale. They go there to learn the mysteries of science; but of the science of life, by far the most important of all, they come away ignorant. One student studies four years, another five, another six, but they are all equally ignorant of the art of living. The university should properly be the mother of genius and character; it is, instead, merely the censor for a certain number of years of a crowd of boys, who are forced to cheat at the examinations in order to rise from grade to grade till the desired doctor's robe is obtained. Then they are all obliged to herd together like sheep in a pasture; the examinations are the same for all, given at stated intervals and in a like manner for all, votes are cast with the same judgment, or rather lack of judgment, since the best parrot of the class can pass the most brilliant examination, and consequently gain the vote, while the greatest genius may perhaps lose the contest, disheartened by the trying formalities of these proceedings. In four years the candidates become doctors of letters; the regulations have so ordained,

and they must be obeyed ; it is never taken into account that one student might perhaps merit the title of doctor after only a month of trial, while another might fail to deserve it even at the expiration of twenty years : all must observe the same routine, pass through the same mill, prepare the same themes, and be present at the same lectures, so that should there be a few intellects more active than those around them, this discipline speedily brings them to the common level. We have previously observed that there are especial exceptions, in those who if they would only apply themselves to the task, might furnish noble results ; for example, in our Institute of Superior Studies the greater number of professors, without consulting the regulations or asking the permission of the ministry, have inaugurated public lectures with private conferences, in which, master and pupil being brought into contact with each other, become better acquainted, and the master is thus better able to be the guide of his scholars, by directing, correcting, and aiding them in those studies, researches, and occupation, toward which they most incline. But no one has the authority to exempt the students from the yearly examinations on fixed themes in the various departments of instruction, and so the professors are all obliged to waste a portion of valuable time in drilling the boys in studies, of which they are expected to give an account at the examinations in order to attain promotion. By what authority therefore, after four years of study pursued in so artificial a manner, a boy can receive his degree and be proclaimed a doctor of any science, passes all understanding. It is true that the title of doctor has but slight significance, other than as a sign that the scholastic penance is at end, and that the beginning of a lucrative career is at hand. The instruction has the advantage of being liberal ; which is certainly one of our greatest blessings. Each and all of our professors can freely expound from his desk whatever doctrine he pleases, from the Positivism which prevails in the literary faculty of our Institute of Superior Studies, to the Hegelianism which reigns in the University of Naples, and the materialism taught in the University of Turin by Professor Moleshott. Every professor is free in the rostrum, and this has been a great advantage ; but professors and students are alike slaves of a law which throws them together for a stated number of years, while it separates them by a barrier of formalities, and which offers no guarantees that the masters shall be skillful and conscientious, or that the pupils shall acquire the desired scientific training. The mechanism which regulates our universities needs to be completely reconstructed ; and

above all it is important that the scientific university and the professional school should be two distinct institutions. The professional school should alone require examinations of ability and capability, but not examinations according to the customary acceptance of the term. Lawyers should be proved by the defense of a first case; the professor by a series of lectures; the architect by the construction of a building; and so forth. These would be examinations of men; while in the universities they now continue to hold examinations of boys. The scientific university should neither have the power of conferring titles, nor of holding examinations. Its sole aim should be the advancement of science, and all who are truly studious will avail themselves of the facilities it offers for mastering that branch of science in the pursuit of which they can attend the lectures of an able public professor.

The successful examinations at a lyceum or an academy should not be unconditionally required in order to effect an entrance to the university, though such certificates of mediocrity should by no means pass unnoticed. The universities should be open to all, without requiring the presentation of titles. They who find the instruction too advanced to be able to follow it, can assemble elsewhere to pursue a preparatory course, but access to the temple of science should no more be denied than to the temple of faith.

It is only by investing the university with this broad and many-sided authority, that it will be not only able to keep up with the progress of ideas, but in a measure to control them. At present there is almost no intercourse between the university and the world without; and while from within it appears to be a great institution, outside its walls its influence is unfelt. Communication should be opened with the world of active life and thought, that the electric currents from the vital forces of society might pass to and fro.

In a word, remove from our university teaching its antiquated pedantry, its bureaucracy, its scholasticism, and it will once again, as of old, shed its pure light upon the world.



UNIVERSAL EDUCATION.

BY RAY PALMER, D.D.

The Connecticut Common School Journal. Edited by HENRY BARNARD, LL.D.
The American Journal of Education. Published Quarterly. Edited by HENRY BARNARD.
Report of the Commissioner of Education. By JOHN EATON, JR., U. S. C.

THE true conception of Civilization is that of a condition of society in which there is a right adjustment of the relations of man to man and of the entire spirit and drift of social life to the highest interests of the race.

This conception is a comparatively modern one, if indeed it can even now be said to have been clearly developed by those who have discussed the subject. The best ideals of the past centuries fell far short of it. They lacked certain essential elements which experience and thought, and more especially the wider influence of Christianity, have supplied. It is still common to find the word Civilization used to signify nothing more than a state of society that is characterized by the possession of some good measure of general knowledge, and of the comforts and the arts of life, and is so distinguished from a state of barbarism.

The truth is, we are convinced, that to no people of any past age has the attainment of anything nearly approaching to a complete Civilization been within the range of possibility. Such misadjustments of the individual members of society to each other, such clashing of interests and aims, such mutual wrongs among the various classes and ranks, such immeasurable vices and miseries, have everywhere existed, that to hold evil in check and to save the well disposed from the horrors of anarchy, have been the chief concern of those who, with right intentions, have wielded influence and power. That sharply to define and carefully to guard the rights, and impartially to secure the highest well being of all who compose the social body, is the true

end of civil laws and institutions, the world has been very slow to learn.

It has, however, for some time been manifest that, among the more advanced nations, a new and greatly auspicious movement towards a right practical solution of the social problem has begun. On many of the more difficult questions connected with social and civil life, the thought and the events of the present century have shed new light. The civilization of the future is henceforth to be carried forward under essentially new conditions. These must be comprehended by those who would rightly shape society and institutions. The many inventions and discoveries that have characterized the period have wrought such changes in the social system—especially in the modes of intercommunication and interaction between individuals and nations—and these have in so many particulars revolutionized the views not only of publicists and statesmen, but of the more intelligent portion of the people, that the great forces of society are in many respects working toward higher ends to-day than they ever could have been before. While this is observable in all departments of social activity, it is especially to be noticed in that of education; in which, notwithstanding so much remains undone, a great deal has been well accomplished.

On a review of the century, it is plain that there has been a steady and great advance towards a practical conviction in the public mind of the necessity of an absolutely Universal Education in order to the highest well-being of society. The growth of this conviction has been discernible over all the States of Europe, as well as among ourselves. The civil convulsions with which the last century closed and the present opened, disastrous as they were in many respects in their immediate consequences, were partly the effect and still more largely the salutary causes, of an awakened desire and striving on the part of the masses of the people, to rise to a better condition. Even the Kings, Princes and Cabinets of the leading States, among the last too often to concern themselves about the rights and the needs of the lower classes, began early in the century to see and to admit the political necessity of giving to the greatest possible number the means of becoming fitted to take care of themselves and to fulfill individually the functions of citizenship. So widely prevalent had been before the idea that education was needed only or chiefly by those who were to fill the learned professions and the higher positions in life, that it was only by a very gradual process that the great truth that education was at once the right and the need of all, dawned

on the understandings even of the most thoughtful and philanthropic.

But the conception of education as a good to which all were entitled to have access, was not yet broad enough. It was sure to be seen also, so soon as any thorough attention should be given to the subject, that there was equal need to enlarge greatly the range of disciplines and studies. While every individual was to be trained and taught, the advantage, it was plain, should be comparatively small if each was trained and taught only on the narrow basis of the old conventional ideas of education. The next step of progress, therefore, was of course the rapid enlargement in all directions of the curriculum of studies, with corresponding advances on the established methods of instruction. It has been clearly seen that to reading, writing and arithmetic in the common schools, and the classical and philosophical courses in the higher institutions, must be added the teaching of the practical sciences and arts; of everything, in short, needed by any considerable number to fit them to work to the greatest advantage in their various pursuits. To reach all classes of society with the means of development and culture, and to teach every individual what he personally most needs to know in order that he may live usefully and well—this is the rounded, the complete conception of Universal Education.

We have spoken of the new impulse which the cause of popular education has received, as belonging to the present century. It ought, however, to be noted that various experiments looking in the right direction had been made at particular points before. Luther and Melancthon, Zwingle and Calvin and other leaders of the Reformation, as a necessary result of their position, recognized the importance of extending facilities for education to the many, and did what they could to encourage schools of different grades. Sturm, in the latter half of the 16th century, and Comenius, in the first half of the 17th, contributed greatly to the improvement of the prevailing methods of instruction, and did much to produce a better public sentiment in regard to the elevation of the people.* Scotland, so early as 1616, by act of Parliament, laid the foundation for the system of schools to which her people doubtless owe much of their proverbial acuteness

* Other names might easily be added of prominent educators whose influence was widely felt in their time; such as Spener, who introduced the catechetical method; Franké, the founder of the orphan house at Halle, in 1696; Felbiger, who reconstructed the schools of Silesia and of Austria; Basedow, who in 1781 established the Philanthropinum at Dessau, among many more or less distinguished.

and intellectual strength. Our own ancestors, but a few years later, amidst all the hardships of early colonial life, established the common schools whose fruits have so greatly enriched New England. The Empress Maria Theresa, on coming to the throne in 1740, performed a noble service of the same kind for the common people, especially in Bohemia and Belgium. Frederick II., in 1750, made provision by law for the institution and support of public schools among his subjects. But most of these earlier movements were only partially successful; because that while the people were required to establish and in part or altogether to support the schools, no adequate provision was made to secure the attendance of the entire body of children, for whose profit they were designed. They all, nevertheless, helped to bring on a better day.

It is always difficult to fix an exact date to a reformatory movement. Before such a movement becomes sufficiently conspicuous to attract the notice of the public at large, much has commonly gone before that had direct causative relation to it. But it will be sufficiently accurate if we say that the modern rapidly progressive era of popular education may very well be considered as commencing, or at least taking a new departure, with the labors of Pestalozzi and De Fellenberg in Switzerland. Pestalozzi was born in 1746 and was fifty-four years old when he established his educational institution at Burgdorf in 1800. Twenty years before he had published his *Lienhard und Gertrud*, which made him widely known as a writer on education; and the next year he published his *Wie Gertrud ihre Kinderlehrt*, in which his maturest thoughts and the principles of his system, that was destined directly and indirectly to inaugurate a new educational era, were very fully unfolded. That part of his life, therefore, in which his influence became wide and practically effective, fell within the present century. In the experiments by which, in connection with De Fellenberg and Wehrli, he attempted a practical application of his theories, enough was accomplished to make an impression that was well nigh revolutionary. The methods had enough of novelty to attract attention. The principles were many of them really new, at least in the distinctness and force with which they were propounded. The enthusiasm of the men was itself contagious. Their influence was felt through Europe, and men watched their labors not merely to admire, but to imitate as well. It was an easy and natural step from the recognition of the fact that education must involve the development of all the senses and of the physical powers, as well as of the purely intellectual faculties, and this in a

simple way, to the recognition of the propriety of carrying educational appliances into every class of society and every sphere of social life. The result was a sudden widening of the range of experiment and instruction—the rapid establishment of schools of agriculture, and of art and science in all their manifold applications to practical affairs. Polytechnic Institutions were organized one after another; and then as the necessary result of multiplying schools and departments of study, an urgent demand for teachers led to the great increase of Normal Schools in which they might be trained. Prussia, during a course of years from 1809 to 1822, reorganized and perfected her school system, since so famous.* France followed the lead of Prussia. M. Victor Cousin made his first report to the French Minister of the Interior in 1831, and a second and supplementary report in 1833; and from that time until recently, each Commune in France has had a public school. Owing to the indifference and neglect of the people, however, this provision has but very partially fulfilled its end. The Scandinavian countries, together with Austria, Switzerland and the smaller German States, have more or less rapidly advanced in the same direction. Sardinia readjusted her system of public instruction in 1859, and the law then enacted has determined the general course of education for United Italy since. Many modifications, however, have been adopted in the changed condition of the country, and other important measures have been proposed and under discussion during the last two years. The Mother of letters and arts, mindful of her old renown, is manifestly resolved to make herself a place among the most progressive nations.

In England several prominent individuals have, at different times, with some success, made attempts to fix public attention on the existing want of anything like adequate means for the education of the common people. Lord Brougham, in 1816, obtained from Parliament the appointment of a Commission to inquire into the state of education among the poor of London. In 1819, he, with some of his friends, established a model school for the children of this class. But England, though moving forward and doing some things wisely

* M. Cousin, in his well-known reports, misled many writers who adopted from him the statement that the Prussian system in its completeness was established by law in 1819. There was no such law enacted at that time. The latest and best authorities affirm that the Minister of Public Instruction showed M. Cousin a *projet* of the system and probably gave him the impression that it was to be formally established by statute. In fact, however, it was carried into effect by means of instructions given to Superintendents, and not by legal enactments.

after her conservative fashion, especially since 1871, is still far behind the most advanced portions of the continent as regards the means of popular education. The Emperor of Russia, in connection with the emancipation of the serfs, appointed a Commission to report a system of national education, which they did in 1861, and in spite of very great difficulties, it seems to be the purpose of the Imperial Government to press on in the good work begun. Even in Turkey, where it would hardly have been looked for, an admirable system of public instruction was promulgated in 1869. How far it will be made practically effective remains to be seen.

In our own country, the awakening of the public mind to the disorganized, or at least flagrantly defective, condition of the common schools, even in New England, cannot be dated much farther back than thirty-five or forty years. At the beginning of this period, their state and prospects were every way discouraging. Almost the only hopeful sign then was that there was beginning to be, in the minds of many, a painful consciousness that such was indeed the fact. Some few preliminary and almost isolated efforts for a reform had indeed been made. In 1827 the Legislature of New York, which so far back as 1812 had been the first to institute the office of State Superintendent, made provision by law for the education of teachers, by establishing departments for their training in eight Academies within the State. In the State of Massachusetts, through the exertions of a few, a decided impulse was given to public sentiment. Among the most conspicuous of those who wrote and spoke with intelligent earnestness were James G. Carter, William B. Calhoun, William C. Woodbridge, who conducted the *Journal of Education*, published at Boston; Dr. William Ellery Channing, whose eloquent pleas for the professional training of teachers and the intellectual and moral improvement of the working classes attracted much attention; Jacob Abbott, the well-known author of "The Teacher;" the Hon. Horace Mann, afterwards the able Secretary of the Massachusetts Board of Education; and we may fitly add Dr. Lowell Mason, by whose efforts chiefly, and not without great difficulty, the introduction of music into the public schools was at length secured. About the same time, in Connecticut, Dr. Henry Barnard was commencing that career of devoted and untiring labor, in the course of which he has rendered such distinguished service to the cause of popular education.

Mr. Mann, in his Report as Secretary of the Massachusetts Board of Education in 1838, wrote as follows, in relation to the actual con-

dition of the schools: "It appeared from facts ascertained during the last part of the year 1837, and communicated by me to the Board, January 1st, 1838, that the common school system of Massachusetts had fallen into a state of general unsoundness and debility; that a great majority of the school-houses were not only ill-adapted to encourage mental effort, but in many cases were absolutely perilous to the health and symmetrical growth of the children; that the schools were under a sleepy supervision; that many of the most wealthy and intelligent of our citizens had become estranged from their welfare; and that the teachers, although, with very few exceptions, persons of estimable character and great private worth, yet in the absence of all opportunities for the most difficult and delicate task which is committed to human hands, were necessarily, and therefore without fault of their own, deeply and widely deficient in the two indispensable prerequisites for their office, viz: a knowledge of the human mind, as the subject of improvement, and a knowledge of the means best adapted wisely to unfold and direct its governing faculties."

What Mr. Mann found to be the state of things in Massachusetts, Dr. Barnard, when he became Secretary of the Connecticut Board of Education, found in that Commonwealth. Provision had there been early made for the institution and support of schools, at first without enforcement by penalties; but these at a later date were found necessary, and were added. After referring to these several enactments, the late Professor Kingsley, of Yale College, in his "Historical Discourse," goes on to say that "from this detail, it is manifest that the introduction of the common school system was a work of time and unwearied effort. By perseverance, however, the benefits of education were finally perceived and acknowledged by all. A school was brought to every man's door; the poor, and even the slave, were within the reach of instruction; and hence, for nearly a century and a half, a native of Connecticut, of mature age, unable to 'read the English tongue,' has been looked upon as a prodigy." It was a great falling away from this that Dr. Barnard described in his first annual report, presented May, 1839. In that report he said—"There is no attempt to enforce the law. Hence our prisons and poorhouses number among their inmates many natives of the State, brought up within sight of the district schools, who cannot read or write; and official returns show that we have thousands who were in no school whatever in the course of the past winter and summer."

It was quite time, therefore, that the work of arousing the public

mind to the need of a wide and vigorous reform were undertaken. It was necessary, at the same time, to take care that a right direction should be given to awakened thought and feeling, by the thorough discussion of the subject in its various relations, and the gathering up of the results of the experiments made elsewhere for the sake of the light they might afford. Dr. Barnard evidently gave himself to the work with the enthusiasm of an Apostle. Commencing the Connecticut Common School Journal in 1838, he entered at once with ability on the fundamental questions pertaining to Popular Education, and began to publish for the benefit of all educators, and others interested, the most valuable information as to what had been done in Europe, and the aims and methods of the best systems and institutions there. In his repeated visits to the principal countries of the old world, he has examined for himself the experiments in progress, and by personal communication with the most prominent educators of Germany and Switzerland, has possessed himself of their best and broadest views. The results of his observations and thinking, he has, for a long course of years, been carefully digesting and publishing in his Common School Journal, and in the invaluable volumes of his American Journal of Education. These volumes constitute an Encyclopædia of facts, arguments, and practical methods which no organizer or teacher can afford to be without. Besides the preparation of these works, Dr. Barnard has delivered lectures and addresses on his favorite subject numbered literally by thousands. Probably no one man in the United States has done as much to advance, direct and consolidate the movement for popular education. In looking back to the commencement of his life-long labors, it would seem that he must contemplate with eminent satisfaction the progress of public sentiment and the good results already attained, as well as the brightening prospects for the future. He has done a work for which his country and coming generations ought to thank him and do honor to his name. The late Chancellor Kent, even in the earlier years of Dr. Barnard's labors, characterized him as "the most able, efficient, and best-informed officer that could be engaged perhaps in the service;" and said of the earlier volumes of his Journal and other publications, "I can only refer to these documents with the highest opinion of their value."* The later volumes are much more complete and valuable than the earlier.

As the result of the efforts of such leaders as those to whom we have referred, the progressive movement for popular education in this

* Kent's Commentaries, Vol. II., 7th Ed., p. 197.

country has been healthful and as rapid as could reasonably have been expected. The policy of the General Government of the United States has from the first been liberal as regards provision for education. In admitting the new States, Congress has made it a condition that in each township a section of land should be set apart for the support of public schools. The State governments also have provided by law for the interests of common education; and though in several of the States the provision is practically far from being adequate, yet the current of public sentiment is setting strongly in the right direction. It is gratifying to know from the census of 1870, that there were then in the United States more than six and a half millions of pupils in more than one hundred and twenty-four thousand schools, taught by upwards of two hundred and nineteen thousand teachers; and that one hundred and fourteen Normal Schools were in operation, only two States remaining without. The influence of the Normal Schools appears in the marked improvement of the common schools under the care of the teachers they have furnished. To these encouraging signs of progress may be added the organization of a great number of teachers' associations and conventions, meeting at stated times for the purpose of discussion and the comparison of views and practical experiences; the great improvement in school-books, apparatus and methods of instruction; the increased respect paid to the office of a teacher, and the deeper interest in the whole subject exhibited by parents, by eminent public-men, and by the press. It is sufficiently humiliating to learn from Commissioner Eaton, that there are still at the very least a million and a half of wholly illiterate adult males in the United States; yet one cannot well note what is actually going forward in the way of educational improvement and not anticipate the speedy coming of a better period. That we cannot as a people rest content till ample provision for Universal Education has not only been made, but rendered generally effectual, seems now to be quite certain.

The true system of means and agencies for the attainment of this great end must accomplish the following things:

1. It must secure to the whole people such elementary education and training as all alike need for the common offices and the ordinary industries of life.

2. Such as shall prepare those who wish to apply themselves to all kinds of labor requiring special skill, to the highest forms of mercantile and general business, to the learned professions and to public life, to do so intelligently and without waste of time and power

3. Such as shall render it easy, in every department of labor, to turn to the best account the various resources of Art and the possible practicable applications of the Sciences.

4. Such as shall effectively stimulate observation, invention and discovery, and so help to extend the boundaries of knowledge.

5. Such as will supply the requisite number of accomplished teachers of all grades, from the primary school to the university.

6. Such as will enable the student who desires to do so to advance to the highest range of scholarship, in the largest meaning of that term.

7. And finally, such as will secure a liberal moral and religious culture to all classes.

Fully to prepare and to put into operation a system of appliances that can do all this, must of course be a work of time and a result of patient and unwearied effort. But great as the task is, when one considers its relation to national well-being and to the advancement of the race it is impossible not to feel that it can and must be accomplished. That it has been earnestly begun, may well awaken thankfulness and lend fresh inspiration to the zeal of those who appreciate its moral grandeur.

The comprehensive statement just made of what is essential to Universal Education includes, it will be noticed, provision for all grades of culture, from the lowest to the highest.* In the advance of the educational movement, there must of course be a working upward, till the colleges and universities, including in these the polytechnic and professional schools, are fully developed and the highest wants are provided for; and a working downward, till the common schools and the schools of purely elementary and practical arts and industries are made as perfect as possible and the lowest wants are met. It is not our present purpose to refer to the higher forms of education. An able writer, we understand, will treat of these in an Article of a future number of this Review. It is in reaching the great

* It has not been necessary, in the modern educational advance, to insist on the value of the higher institutions of learning. This was already well understood. The spirit of progress has, however, reached and agitated these. They have been moved to add to the colleges, faculties of Science and Art with reference to their practical applications; to produce and use far better text-books and more extensive and ingenious apparatus, and to adopt better methods of instruction. Men of wealth have been led, with a munificence before unknown, to give large sums for the erection of buildings, the enlargement of libraries and cabinets, and the endowment of new and special chairs of instruction. The result of these things has been, in the older institutions, like Yale and Harvard, some decided progress towards a realization of the true idea of a University.

masses of the people, and especially the laboring classes, that the chief difficulties must be encountered and the most notable transformations wrought. Let the common schools of the country be made numerous enough and such in character as they should be, and the higher education will take care of itself. The force of public sentiment will be sufficient to secure the liberal endowment of the needed institutions, and to give them proper shape.

At this point, then, we reach the great practical question—How is the *universal* attendance of the young on the means of popular education to be secured? It is just here that there is at the present time, as it would seem, the greatest need of light, or at least of strong convictions. The subject is sometimes treated without a due regard to its intrinsic difficulties. It has been thought that what is so much to be desired might be accomplished in a very summary way by the sheer force of law; as if nothing were needed but compulsory enactments. The idea of compulsory education is by no means a modern one. It is at least as old as Plato. In the *Laws*, the Athenian Stranger is made to say :*

“In these several schools let there be dwellings for teachers who shall be brought from foreign parts by pay; and let them teach the frequenters of the school the art of war and the art of music; and they shall come not only if their parents please but if they do not please; and if then education is neglected, there shall be *compulsory education* of all and sundry, as the saying is, so far as this is possible; and the pupils shall be regarded as belonging to the *State* rather than their parents.”

In the modern educational movement, the question of compulsory education has of course become an immediately practical one. On the one hand, we have the fact that in this country, where the execution of the laws depends so much on public opinion, though compulsory statutes—those of Connecticut for example—availed for a time, as stated by Professor Kingsley, yet at last when the public grew indifferent, they proved wholly ineffectual. On the other hand it appears that compulsory laws with a strong government to enforce them, as in Prussia, have produced excellent results. The effect of legislation, in such a matter, must obviously depend very much on the circumstances under which the experiment is made. Statutes, however stringent, are likely to accomplish very little unless some power behind sustains and gives them force.

On the whole, we incline to the opinion that here in the United States, it would be nearly or quite as great an error to attempt to se-

* Plato's *Laws*, Jowett's Trans., Book 7., p. 732.

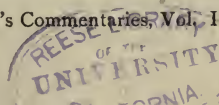
cure Universal Education by relying chiefly on legislation, as it would be to leave parents and children entirely free to use or to neglect educational provisions. We believe fully in coercion as a necessary element in a complete educational system; but there is much that in the order of importance should be placed before it. There is need of practical wisdom in the adjustment of means to the end proposed. Much may be done that will help to reduce the necessity for coercive measures to the narrowest possible limits. If the idea of compulsion is put in the foreground and made too prominent, it is very likely to produce the impression in the popular mind that to educate children is an unwelcome duty, like that of paying taxes; and so to cause it to be regarded with repugnance. The statute should press only as the adjunct and complement of sound views wrought into the popular mind and heart; together with all persuasive and generous influences so brought to bear as to move the better portion of the people to do gladly and thankfully what, for the sake of the remaining portion, the law must positively command.

The truth must not be overlooked that the basis and starting point for the Universal Education of the people is the family. Though the individual may be regarded as the unit of social life, the family is the unit of social organization. By the law of nature children are placed, in their earliest and most impressible years, under the care and control of parents. Their education, for good or evil, will inevitably begin under the influences so supplied; and parents have, or may have, by far the most effective agency in determining what their children shall be when they shall have grown up to mature years. They have, too, a deeper interest in the future of their children than any one else can have. Says Chancellor Kent;

“Without some preparation made in youth for the sequel of life, children of all conditions would probably become idle and vicious when they grow up, either from the want of good instruction and habits, and the means of subsistence, or from want of rational and useful occupation. A parent who sends his son into the world uneducated, and without skill in any art or science, does great injury to mankind, as well as to his own family; for he defrauds the community of a useful citizen and bequeaths to it a nuisance. This parental duty is strongly inculcated by the writers on natural law. Solon was so deeply impressed with the force of the obligation that he even excused the children of Athens from maintaining their parents, if they had neglected to train them up to some art or profession.”*

Christianity likewise distinctly recognizes, and enforces with its sanctions, the responsibility of parents for the suitable training of

* Kent's Commentaries, Vol. II., 7th ed., p. 187-8.



their children. By special precepts it in fact constitutes the family a school.

The first step, therefore, towards Universal Education is to act on parental judgment and affection; to awaken in the minds of parents the conviction that with them it rests to determine, in great measure, the failure or success of their children in coming life; and to show them the necessity of earnest effort to secure for them, in addition to home training, the best possible educational advantages. When once their interest has been awakened, and they are led to notice that other children in circumstances like those of their own households, by availing themselves of the means of education placed within their reach, have been enabled steadily to rise till they have attained the highest positions, the largest wealth, the greatest honor and influence; to gain, in short, what are regarded as the highest prizes of life: when they see that the artists, the men of science, the scholars, the poets, orators and statesmen, to whom the world does homage, have ascended from the lowest to the highest of human conditions by means of personal training and culture, they will, as a matter of course, become eager to secure for their own children the benefits of education. Great numbers of parents, if proper pains be taken, may so be taught to claim it as their right—far better than to have them driven to it as a duty—to secure for their sons and daughters every advantage that the best public schools, and afterwards perhaps the higher institutions, can bestow.

It may be thought that this method of beginning with the family will prove too slow; that to wait till parents shall have learned to demand that provision be made for the education of their children, will be to defer indefinitely the day when the means of culture shall be enjoyed by all. To this objection two answers may be given. First, that were this true, it is none the less beginning where alone, in the nature of things, a sure foundation for Universal Education can be laid; so that it were best to adopt this course, although it would take longer. But secondly, that if once it be clearly understood that this is the primary thing to be done, and the efforts of those who would promote the cause of education were energetically turned in this direction, it need not require so very long a time to enlighten and move the majority of parents. Even now it is often seen that parental solicitude prompts the common laborer, himself uneducated, not only to desire, but to make great sacrifices to secure for his children the educational advantages which may prepare them to rise in the social scale, and become, in the various contests of life, the rivals

of the best. What then might not be looked for, if systematic and effective means to enlighten them were used; if courses of popular lectures, for example, were arranged in a way to reach the many who need to be instructed on the subject; if by friendly visitation in their homes, they were approached with persuasive words; if simple tracts and books, prepared for the special purpose, were placed in every family where there was any one who could read; and above all, if the various Christian Churches, conscious of a high responsibility in relation to the matter, would co-operate vigorously in the work; and the ministers of religion, and the great army of Sabbath-school teachers, would faithfully teach the inexpressible value of education to all classes? We hold it certain, that if the masses who to a great extent neglect to seek a proper training for their children, were approached on the subject of education as a right to be justly claimed, and a great and precious benefit, with something like the earnestness and perseverance that have been exhibited in relation to temperance, for example, it would not be found difficult to enkindle in the minds of great numbers, now indifferent, a strength of desire, an enthusiasm even, in behalf of education, that would speedily and greatly swell the ranks of pupils in our schools. The movement once begun, moreover, might be expected to advance as if in geometrical progression. Almost nothing has as yet been attempted in this direction. The experiment should faithfully be made.

While endeavoring to bring parental influence to aid spontaneously in securing attendance on the public schools, the schools themselves must be invested with an attractiveness which shall be a positive element of power. The locality, the edifice and architectural arrangements, the methods of government and instruction, the entire atmosphere and genius of the place must be made such as to invite attendance. The reverse of this was very generally found to be the case by Mr. Mann, in Massachusetts, and by Dr. Barnard, in Connecticut. The common school house of forty years ago, even in the best rural districts of New England, was too generally placed on a site appropriated to this purpose apparently because it was good for nothing else. It might be on a naked rock, a barren sand or clay bank, or a piece of bog meadow, without inclosure, shade, or ornament; hot as an oven beneath its low roof in the summer, and in the winter half-warmed with its open fire-place. In the cities, of course, the state of things was better, but almost everywhere it was bad. Within the unsightly edifice were found seats hardly more comfortable to sit in than the stocks, and much too commonly an almost ferocious severity

of discipline. With honorable exceptions, the teachers knew comparatively little of the art of teaching, or of the pleasant devices which it belongs to that art to employ in relieving monotony by well-adjusted change, and breathing over all a spirit of cheerful animation. No wonder that children shrank from leaving home, especially when that was bright and happy, to spend long hours each day where all was sombre and forbidding. Let the location of the school-house be pleasant, healthful and convenient; let its architecture and outward aspect, its surrounding trees and shrubbery, when these are possible, its walks and its playgrounds, and all its internal economy and arrangements, be such as true taste and fitness will approve; and above all, let the teacher be one who practically understands the art of combining the necessary authority with a spirit of refinement, gentleness, and love; and the place will have a charm about it which both parents and children will not fail to recognize. One of the earliest attempts that we remember to make a large school positively attractive and enjoyable, was that of Mr. Jacob Abbott at the Mt. Vernon school in Boston, a private school, established upwards of forty years ago. As it was in the midst of a city there was nothing external to distinguish it; but its arrangement of studies, its variety of duties, its well-timed recreations, its perfect order, which made the whole appear as if moved by unseen clockwork, and the kindly and genial spirit that seemed entirely to pervade the place, gave it to the pupils the attractiveness of a social gathering for the enjoyment of a refined and noble pleasure. By similar means, even in the heart of the City of New York, the Twenty-seventh Street public school has for a long time been kept crowded; the parents being eager to send their children, and the children counting it a hardship to be excluded. It will be an immense advantage gained, when to the minds of parents and children generally, the public school shall seem surrounded with a lustrous halo, and connected with all sorts of pleasant associations.

Of course it is impossible that any school should bear the character now indicated, unless it be thoroughly permeated by a moral atmosphere that is felt, by all who come in contact with it, to be positively pure and salutary. There has been no little discussion, and some excited feeling, in relation to the opening of the daily sessions of the public schools with the reading of the scriptures and some simple religious exercises. We do not propose to discuss that subject here. To do so would oblige us to exceed our limits. There are, no doubt, serious difficulties to be met in reaching an adjustment

of it that shall prove generally satisfactory. Yet we cannot but think there are none that may not be surmounted without infringing the rights or wounding the consciences of any, if the matter be approached in a just and kindly spirit. But leaving this great question to be decided in the light of full discussion and large experience, we earnestly maintain, that the elementary principles of moral philosophy, and the ethical rules that must practically determine the spirit and conduct of every well-ordered life, are an absolutely essential part of the course of popular instruction and discipline; and that the omission to teach these faithfully, cannot be justified on any ground whatever. A thousand children are brought together into one of our city schools. As they come from their homes, many of them from their miserable dens that do not deserve that name, they form a heterogeneous multitude, a large part of whom have received no wholesome instruction, and of course have no distinct conception of what good morals and refined manners do really require. There may be among them many jewels in the rough. But how are these young—it may almost literally be said—semi-barbarians, to be fashioned by the school into modest, well-behaved, and to a reasonable extent, refined and virtuous boys and girls? Is there the least hope that any such result can be attained without giving them careful instruction as to the difference between right and wrong, and as to what constitutes, in minute detail, good conduct, cultivated or at least becoming manners, and pure morals? It cannot be done by the mere force of authority and command. The moral nature must itself be quickened, conscience and sensibility developed, right impulses and worthy aspirations awakened and directed, and the perception of what is excellent and beautiful in character made as definite as possible. So far as this is done, the influence of the teacher is increased, and the difficulties of his work diminished. His words of counsel will have greater weight and his rules and drill will be more effective. Law and order will be sustained by the convictions, and the tastes even, of the great body of the pupils. A school in which the pupils are wisely and persistently taught good morals and good manners, as an essential part of the course of daily instruction, and inspired with a laudable ambition to exemplify these in themselves, will steadily become homogeneous, more plastic to the teacher, and more happy and successful in its study. There will be little difficulty in drawing pupils to such a school.

In determining the internal arrangements, method and spirit of a school, the teacher will necessarily be the central force. It will not

be possible to make such schools as will win and hold the popular favor, without teachers that understand their business; teachers that to an acquaintance with the branches of knowledge to be taught, add also agreeable manners, self-control, tact in organization and government, practical skill in the art of teaching, and a true enthusiasm in their work. In the earlier days of the present educational movement very few such could be found. Even now, the supply is comparatively limited, after all that has been done in the establishment of Normal Schools. Of the large number of these schools reported as in operation throughout the United States, a few are well organized and offer those who desire to teach the means of an adequate training, theoretical and practical, for their vocation. But many that are called Normal Schools, are but very partially what the name implies. It is indispensable to an advance towards Universal Education, that the schools for the training of teachers already existing should be made in the highest possible degree thorough and effective, and that many more should be added to the number; and then that care should be taken by those who are choosing teachers to accept such only—unless it be in cases of sheer necessity—as have availed themselves of the advantages of those preparatory institutions. By demanding of those who would engage in the business of teaching the evidence that they have faithfully submitted themselves to the theoretical drill and the experimental routine of the genuine Normal School, or done what is equivalent to this, two great advantages will be secured:—a higher type of teachers will be found generally in the places of instruction, and the profession of teaching will become, as it should, more honorable in public estimation and more remunerative to those who are successful in it and accept it as their life-work. It is impossible to make the position of a teacher such in the popular judgment that men of a high order of talent shall deem it worth their while to choose it for life, as one of commanding influence and yielding satisfactory rewards, except by elevating the average standard of qualification for teaching, and by sending forth from Normal Schools of the very highest character large numbers who are able to vindicate their right to respect and recompense. The more of such teachers are furnished, the more the priceless value of education will be seen of all, and the more easily will its influence be extended throughout society. We are on the right track, in this department of educational progress; but advanced educators, who are leaders of public opinion, should not rest satisfied till the whole country has a system of Normal Schools as complete as it can be made.

But even the most perfect educational system cannot be expected fully to accomplish its ends so as to commend itself permanently to popular favor, without efficient superintendence. That this is indispensable, experience has amply shown. Liberal provision for it has accordingly been made in the school legislation of the most advanced States of Europe, the form of it differing somewhat in different States, but the reality amounting practically to nearly the same thing in all. Teachers, even with the best training for their work, will on trial develop different degrees of aptitude. They will always be liable to grow remiss at some particular points; or to push favorite ideas and theories too far; or to venture on unprofitable experiments, at the expense of loss of time to the pupils and of money to the parents; or to lose the progressive spirit and fall into mere routine. It is therefore a matter of absolute necessity that there should be official and authoritative supervision, by means of which slight aberrations should be seasonably corrected, a sense of responsibility maintained, and the vital forces of each school kept perpetually in play. Happily, under the General Government in the United States there is now a department of education, at the head of which is an able and energetic Commissioner, Mr. John Eaton, Jr.; not exercising a direct superintendence over particular schools, but over the general adjustment and working of the entire system; collecting, and publishing in elaborately prepared annual reports, the statistics and history of progress made, and doing whatever can be done by such an officer to enlighten the public mind, in relation to national education, and give to the efforts of educators a wise direction. Each of the States, with the exception of Maryland, has now a Superintendent. The State Superintendents, of course, come into closer relation to the teachers and the schools. Where Superintendents of cities and towns have been provided—and they have been in many towns and cities and ought to be to the greatest practicable extent—they are able, by immediate contact with teachers and schools, to suggest, direct, and stimulate, as may be needful. If the Superintendents are qualified for their position and exercise a constant and faithful supervision, the result is sure to appear in the high discipline, the thoroughness of instruction and training, and the healthful atmosphere and moral beauty of the schools.

In proportion as the public schools are made to realize the ideal of what such institutions ought to be, the number of private schools will undoubtedly diminish. These have multiplied to so great an extent, because the public schools were not of a character

to satisfy intelligent parents; and the withdrawing, on this account, of large numbers of the better class of pupils, has in turn helped on still further the process of deterioration. But with the best public schools, there will probably always be some parents who for one reason or another will still prefer schools of their own arranging. In securing an adequate education to every child, each State should of course provide by law that the *private*, no less than the public schools, should be subject to the inspection of the Superintendent of the city, or district, within which they are kept. It should be his duty to see that the programme of studies in the former were at least equivalent to that prescribed in the latter of the same grade, and to ascertain, by actual examinations, that the pupils were in good faith taught accordingly. Otherwise it would be possible that under the pretense of attending private schools, many children would grow up without having received any valuable training. No such possibility should be allowed to exist. While in accordance with the free spirit of American institutions, entire liberty should be allowed to such as may prefer to send their children to private schools, it belongs to the State to see that these too have all the advantages and safeguards of an impartial supervision. Without this there can be no certainty that Universal Education is secured.

That the movement towards Universal Education must rely largely for its success on the things to which we have particularly referred, will not be doubted by any who have intelligently given attention to the subject. To enlighten and interest parents and enlist the full power of home influence in favor of the schools; to make the schools themselves, externally and internally, inviting as well as morally healthful; to supply an adequate number of competent and well-trained teachers, and to secure by watchful supervision over public and private schools alike, the right working of the system even to its minute details, will be, we believe, to bring a large majority of the children of the country gladly to avail themselves of the means of education. These will be likely, at least the larger number of them, to make the most of their opportunities, because they will have learned to prize them as related to their own prospects for coming life. Awakened desire for knowledge will stimulate them more than statutes. But what of the remaining portion—the minority of children, many of whom are without home and parents, and have no chance of becoming acquainted with the worth of education, or with the attractions of the schools; or, worse still, who have parents so destitute even of the better instincts of humanity that, for their own

gain, they condemn their offspring to spend what should have been their years of discipline and culture, in the manufactory or the workshop? To leave these to their fate is to permit the existence in the bosom of society of a vast hot-bed of all vice; to perpetuate a school which will unceasingly educate and send forth in abundance all sorts of evil-workers. It is for the benefit of this class of the children of the country chiefly, that constraint must needs be applied. Compulsory laws, faithfully enforced, are for them indispensable. Experience has shown this everywhere. Let us not be understood as saying that it is best to wait till all other means have been fully tried, before requiring by law that all children at the proper age shall attend the schools. Judicious laws to this effect should be at once enacted where they have not been, and inexorably enforced; and this enforcement ought to be heartily sustained by public opinion. We have simply wished to insist that in the order of thought and feeling, in the popular apprehension of the matter, compulsory laws, instead of being the first things, should be among the last; that the friends of Universal Education should make it their chief labor so to instruct parents in relation to their duty and to enlighten the public mind in general, and so to perfect the character and working of the schools, that to the larger and better portion of the people it shall seem a matter of course, a privilege not to be foregone, that their children should diligently avail themselves of the means of education. It cannot be too strongly urged that there is a great work to be done of the kind which has been indicated; a work without the faithful doing of which we shall look in vain to legislation. Is there not some danger that in giving legislative action too great prominence, and turning our eyes too eagerly towards that, we may be in some measure diverted from the higher and more essential work of using direct and effectual means to remove the obstacles to Universal Education, that lie in the ignorance and prejudice and selfishness of the people? Let such means be used far more widely, more earnestly, and with more of Christian patriotism and philanthropy than they ever yet have been, by all who love their country and their race; and at the same time let them be supplemented by wise laws, enforced in a kind spirit, but with unyielding firmness. When the absolute necessity not only of providing the means of education for all, but of actually educating every child—so far at least as to qualify him or her for the duties of ordinary social and civil life—shall have become a profound conviction in the minds and hearts of the great body of the people,

love and law will harmoniously work together for the speediest possible attainment of the great result desired.

If the vast work of educating the entire population of the United States, so that all classes shall be able to meet the responsibilities of their position under favorable conditions, is to be successfully carried forward, it must be through the combined efforts of educators and other leaders of public thought and feeling directed vigorously to that specific end. A magnanimous liberality, broad and enlightened views, multiplied and reliable agencies, a generously co-operative spirit, and indomitable energy and perseverance, will be imperatively demanded. The more is done in the way of collecting and comparing the facts of experience, the more there shall be of candid and searching discussion of principles and methods, the more professional enthusiasm is enkindled among teachers, and especially, the more the power of education to advance the well-being of a people is illustrated before the eyes of all, the more rapid will be the progress towards complete success. That the education of the children of the country is to be accomplished mainly by means of the public schools, if it be done at all, we believe to be a thing entirely settled in the minds of the more intelligent portion of the American people. The system now in operation is not going to be broken up, that the funds appropriated by the General and State governments may be divided among many paltry cliques, but is to be perfected in the highest possible degree, and compacted into a grand unity. There is a wholesome sensitiveness in the public mind in relation to this matter; and no class of citizens, nor any political party, can make the attempt to overthrow or to cripple the public schools without arousing a popular sentiment that will overwhelm them with mortifying defeat. Not until, as a nation, we have lost the spirit of our ancestors and the love of enlightened and salutary freedom; not until we have become basely degenerate, and have lost the honorable ambition to build up on this magnificent domain that God has given us a nobler civilization than the world as yet has ever seen; shall we suffer ruthless hands to be laid on those provisions for the culture and elevation of all, which even now, though not yet complete, are our glory and just national pride. What has been accomplished during the last half century justifies the best hopes for the future.

It is coming to be more and more clearly seen that the prosecution of the work of extending education to the whole people is urged by the highest considerations. Political economy demands that it be done. The power of each citizen to benefit the whole is

enhanced tenfold by education. It will ordinarily be directly proportioned to his right discipline and knowledge. Philanthropy equally demands that it be done. The coarseness, the depravity, the vice and wretchedness that characterize such multitudes in our towns and cities, will only yield to intellectual and moral culture that shall reach them all. Patriotism demands that it be done. It is only by fusing together the elements supplied by the immigration from so many countries, that an American people in a good degree homogeneous in character, possessed by a common spirit, filled with similar aspirations, and ready to co-operate in all that may advance the true prosperity and glory of their country, can be formed. Christianity demands that it be done. She has made known the inestimable worth of individual man, and has asserted the obligation of the rich, of those who make and those who administer the laws, and of the churches and the ministers of religion, to recognize in each fellow-man a brother, and to do whatever wisdom and love combined can do, to elevate and bless those who are born to few advantages. We know of nothing to which the best gifts of genius, and the highest intellectual and moral culture can more worthily be consecrated, than this truly noble work of bringing on as speedily as possible the day when popular education shall have been made literally universal. Every educator, every statesman, every man of wealth and personal influence, every educated young man or woman, may well count it an object worthy of the best ambition, to help forward a work on which, to so great an extent, depends the future well-being, not of our own country alone, but of the whole human race.

INDUSTRIAL ART EDUCATION IN THE UNITED STATES.

IN matters of education, the United States has much to learn; much either to create or to borrow, before it can rank with the leading countries of Europe. Our spread-eagle orators have lauded the common-school system to the skies; yet one of the most important elements of any school system—compulsory education—is just beginning its career with us. It has been adopted in but half a dozen States; in the others, public opinion has not been lifted to the necessary level. Yet this feature has been the pride of the Prussian schools for more than a century, and is found in many other continental countries. But it is in its system of technical or professional education that this country is the most deficient. It is no discredit that our highest institutions of learning do not rival those extensive universities of the old world, such as the university in Vienna with its two hundred instructors and four thousand students, and nearly four hundred distinct courses of lectures, covering the entire realm of science, letters, philosophy, and religion; or those magnificent polytechnic schools which are found in most of the continental countries, such as that at Carlsruhe, Baden, with its more than fifty instructors and five hundred students, and its well-organized schools of mathematics, engineering, machine building, architecture, chemistry, forestry, and agriculture. These are the outgrowth of an older civilization, and are not looked for in new or comparatively new countries. There are also those who may contend that the constitution of American society and character, and the conditions of success here, are not adapted to the longer and more thorough discipline in law, theology, and medicine which is required in many foreign institutions; that we are a money-making people and have not time to spend half our lives within the academic walls; and that the average American must see, not merely culture and intellectual greatness as the reward of study, but financial success, he must be satisfied that his university training will enlarge his facilities for making money.

But it is in this very respect that the American educational system is the most behind that of foreign countries. Europe is full of schools that teach men how to attain the best results in every department of industry: the agriculturist, how to make the soil yield the most and the best; the stock raiser, how to produce the finest types of domestic animals; the forester, how to make the boundless woods contribute the most to the general comfort and happiness; the miner, how to dig from the earth its mineral riches, and the metallurgist, how best to use them; the chemist, how to combine and separate with the most useful results; the mariner, how to protect from storm and wave the rich commerce in his care; the manufacturer, the best and speediest modes of converting raw material into the finished product; the engineer, how to overcome apparently insurmountable obstacles in nature, and give to commerce and travel those magnificent public improvements such as the Suez Canal and the Mont Cenis Tunnel. The governing principle of all these institutions is, that intelligence is the most important element of progress in every department of industry; that agriculture, commerce, manufacturing and mining are based on science, or are sciences in themselves, no less than law, theology, and medicine; and that it is as important to produce intelligent farmers, miners, and manufacturers as it is to have learned preachers, lawyers, and doctors. But how far have these technical or special schools been founded or borrowed by the Americans, who have not the time nor the patience for pure intellectual development, but must see a reasonable financial promise in every undertaking? To what extent have they developed that system of technical education which is most nearly allied with money-making?

The importance of making science subservient to agriculture was recognized more than three-quarters of a century ago in Germany, and now excellent agricultural schools and special schools of chemistry are general throughout Europe. In the United States, a great agricultural country, deriving a large proportion of its wealth from the soil, this important branch of education is in its infancy. Consider the magnificent schools of mines in France, Saxony, Prussia, Austria, Sweden, Russia, and other European countries, with courses of instruction occupying from three to four years—and even eight years in the Imperial School of Mines in St. Petersburg! In the United States, where the earth teems with mineral wealth, schools of this class are of recent origin and generally connected with other institutions. Until within a few years, our young men have been obliged to go to foreign lands, in order to become skilled miners and metal-

lurgists. Schools of commerce of a high grade are common in Europe, both independent of and connected with other institutions; but in the United States the only commercial training is that afforded by the business colleges established and maintained by private enterprise. So also, in most of the maritime countries of Europe, are found schools of navigation, the object of which is to train mariners and masters of merchant vessels. The European schools of forestry, which afford thorough theoretical and practical instruction in silviculture, have contributed largely toward the preservation and better cultivation of the valuable forests which constitute such an important source of national wealth. But no such institution can be found in this country. The United States Commissioner of Education, General John Eaton, has estimated that not less than fifteen million dollars' worth of horses are annually lost in this country for the want of skillful medical treatment. And yet, until recently, there have been no opportunities in the United States for public instruction in veterinary science; or they have been very limited. Since 1857 there has been a veterinary college in the city of New York which claimed to be the only regular public institution of the kind in the United States. The Massachusetts Agricultural College at Amherst, and Cornell University at Ithaca, New York, have each a professor of veterinary science. What other schools of this kind have we? Yet Europe has not less than twenty-five well-organized veterinary colleges, the best of which are found in Germany. Not only are educated veterinary surgeons thus supplied for the army and the civil service, but "privileged horse-shoers" are graduated. So, too, schools for the training of midwives are common abroad, and in some countries no woman is allowed to practice as such unless she is provided with their certificate. Austria has not less than eight of these schools, in which more than twelve hundred women every year receive practical and theoretical instruction. Special schools of architecture, although of comparatively recent origin, also form a part of the educational system of various continental countries. Most of these technical schools are public institutions under the direction of the government.

The forward movement, however, has been begun in the United States. Under the head of the foremost educator of America, our oldest college has already thrown off its narrow, conservative, academic character, and is rapidly advancing to a place among the grand universities of the old world. Here also the wedge of reform has been entered into the loose system of medical education which has always obtained in this country; and the Harvard Medical School

bears aloft the standard of progress, the forerunner of a better era. Although the importance of creating State colleges of agriculture in the United States was urged by prominent agriculturists as early as the year 1837, the oldest institution of this kind is not yet out of its teens ; for it was not till 1857, that the State Agricultural College of Michigan was opened. But under the impulse given by Congress in 1862, when about eight millions of acres of the public lands were granted for the establishment of colleges of agricultural and the mechanic arts in all the States and territories, institutions of this kind have been rapidly multiplied, and are now in successful operation in many of the States. In the important department of industrial education, our institutions are of recent origin. One of the most completely developed, the Massachusetts Institute of Technology in Boston, is scarcely a dozen years old ; but its facilities for instruction in the industrial sciences and arts are already extensive, and will doubtless be greatly augmented in the near future. In the same field, doing good work, are those valuable young technical schools, the Stevens Institute of Technology, in Hoboken, New Jersey ; the Rensselaer Polytechnic Institute, in Troy, New York ; the Sheffield Scientific School, New Haven, Connecticut, the Polytechnic College of Pennsylvania, in Philadelphia ; and Lafayette College, at Easton, Pennsylvania. While in the department of mining, a good beginning has been made by the schools of mines of Harvard University and Yale and Columbia Colleges. And here should be mentioned with honor our youngest school for industrial education, the Worcester (Mass.) Free Institute of Industrial Science, but recently opened, with its vast machine shop, for practical training. The good work, therefore, in many departments of technical education is progressing, and the introduction of the latest feature into our system of public instruction, that of art education, brings us to a consideration of that topic.

Before proceeding further, it may be well to inquire what art education is, how it is imparted, and what are its uses. And here we shall make a distinction between general industrial education and industrial art education, by treating the latter as a branch of the former. Mr. J. Scott Russell, who has read England a valuable lecture on this subject in his "Systematic Technical Education," defines technical or industrial education as "that which shall render an English artillery-man a better artillery-man than a French man ; an English soldier a better soldier than a Prussian ; an English locomotive builder better than a German ; an English ship-builder better than an American ship-builder ; an English silk manufacturer supe-

rior to a Lyons silk-manufacturer; an English ribbon-manufacturer superior to a Swiss ribbon manufacturer." It is true that art education, as a branch of general industrial education, will contribute to all these ends, and will have an important influence upon all branches of manufactures; but it relates more directly to what may be termed the industrial fine arts—those industries in which the superiority of the product consists in the excellence of its model or pattern, the taste of its design, or the beauty of its colors. We shall not here consider art education in its æsthetic, but in its industrial relations; not the more advanced branch which has for its object the training of painters, sculptors, fine engravers, etc.; but the more elementary and practical feature which gives us skilled workmen in the ordinary branches of industry. We shall consider, not fine art education, but industrial art education.

The system of industrial art education is based upon a thorough knowledge and skill in drawing. While drawing constitutes an important element in every department of technical education it is the main feature of the branch under consideration. Those who look upon drawing as valuable chiefly to the draughtsman or architect, or as a matter of sentiment, an idle accomplishment; who have derived their views of its utility from the old-fashioned pedagogue who flogged his pupils for idling away precious school hours by covering their slates with bad pictures of houses, or worse of ships, know little of its importance as an element of national prosperity. "Art education," says Mr. Walter Smith, "in the form of industrial drawing, whatever it may cost the country will be repaid to it in the increased value of industrial products; it will develop the intellect of the people in an eminently practical direction." The French imperial commission, appointed in 1863 to consider the best means of advancing the art education of France, with the view of improving its industrial facilities, after pointing out how much French industry was indebted to the drawing schools of that country, reported, in 1865, that "among all the branches of instruction which in different degrees from the highest to the lowest grade can contribute to the technical education of either sex, drawing, in all its forms and applications, has been almost universally regarded as the one which it is most important to make common."

How, then, is this instruction to be imparted to the masses. First, by the public schools, in which drawing should constitute an obligatory exercise, from the primary to the high school; secondly, by night-schools and evening classes for adults; thirdly, by special schools of

drawing for all classes; and lastly, by museums, art galleries, and other public collections, as well as courses of public lectures on art subjects, all of which are important forces in the department of industrial education. The benefits of this instruction are not limited to those apt with the pencil. The long experience of Mr. Smith has taught him that about one hundred per cent. of school children can be taught to draw well, and that there are but four classes of human beings incapable of profiting by this instruction—the blind, the idiotic, the lunatic, and the paralytic.

The less thoughtful may wonder how the industrial prosperity of a nation can be so dependent upon the art education of its people. This inquiry has been well met by Mr. Walter Smith, in his excellent treatise, "Art Education, Scholastic and Industrial," recently published. "Within the last five and twenty years," he says, "we have seen a wonderful change take place in the money value of the manufactures of England. While the cost of producing most of the products of industrial art has decreased by about one-half, through the invention of various machines and the discovery of labor-saving processes, the actual value of the manufactured article, taking one branch of manufacture with another, is nearly doubled; and this difference is not to be accounted for by any alteration in the value of money. How, then, is it to be explained? Simply thus. A manufactured article, whether a garment, a piece of porcelain, an article of furniture, or even a golden chalice, may be said to possess three elements of value. First, the raw material; second, the labor of production; third, the art character. The first two in some few cases are a large proportion of the value of the whole; and, where no art whatever is displayed, it forms the whole value. But in a vast majority of the manufacturing products of every country, the elements of cost of material and cost of labor are insignificant in comparison with the third element, viz., art character. It is that which makes the object attractive and pleasing, or repulsive or uninteresting, to the purchaser, and is consequently of commercial value. In many objects where the material is of little or no intrinsic worth, the taste displayed in their design forms the sole value, or the principal, and it has been the general elevation of that element which has nearly doubled the commercial value of English manufactures. I am not aware of any great improvement of material, or of demand, but have seen with my own eyes an advance in the artistic element in many branches of British industry, from a condition closely bordering upon the barbarism of savage races to the refinement of the greatest art epochs.

And it has not been an exceptional case, or a development in one direction owing to peculiar circumstances. If we take pottery, glass, porcelain, terra cotta, metal work in wrought iron, brass, bronze, silver plate, goldsmith's work, jewelry, paper-hanging, carpets, parquetry, encaustic tiles, furniture, cabinet-making, upholstery, stained glass, mural decoration, wood and stone carving, chasing, enameling, lace-making, embroidery—all show that infusion of taste which has in all cases increased, and in many cases doubled their value in the market in five and twenty years."

Again, in quoting the testimony upon this point of a manufacturer of one of Massachusetts' busy industrial centers, he says: "In one room where I saw an actual preponderance of old men, who were studying the same subject from the same book which I have taught to children eight years old and upward, a manufacturer made the statement that their designs cost them forty-five thousand dollars a year, every dollar of which went to England, France, and Germany. If a school of art had been in operation in that city for ten years the designs would have cost that manufacturer perhaps five thousand dollars a year, and the dollars would have been kept within a mile of the mill—a clear gain of forty thousand dollars a year to the country in one city alone. That forty thousand dollars a year is one of the self-imposed taxes upon our ignorance, which we pay to other countries, and is a sign of our bondage and slavery to them."

The experience of England affords a forcible illustration of the practical value of art education. When the industrial and art products of all nations were gathered in London, in 1851, the English manufacturers were amazed at the beauty and grace of design shown by many articles of continental manufacture, and were especially humiliated by the marked contrast between foreign earthenware and glass, and the English collection, "which," in the language of Mr. Russell, "disgusted the whole nation with its blue earthenware, plates, cups and saucers, borrowed from the two thousand years' tradition of China, and with its huge lumps of glass called decanters and glasses, cut or molded into hideous distortions of form." This inferiority was wisely attributed to the lack of art education, by Prince Albert, whose earnest efforts were at once directed toward the establishment of art schools in the manufacturing districts. So soon did these young institutions bear fruit that at the next Universal Exposition in 1855, England, in the opinion of Mr. Russell, "was no longer outstripped in pottery and glass"; and when, a few years later, a commission came from France to ascertain the cause of this marked progress, they went home and

pointed to the English art schools, and the South Kensington Museum, as a sufficient explanation. The satire which Sir Charles Williams, quoted by Mr. Marryat, had long ago directed against the crude wares of English potters, had now lost its force.

“Such work as this can England do?
It rivals Dresden and outdoes St. Cloud.
For lace let Flanders bear away the bell,
In finest linen let the Dutch excel,
For prettiest stuffs let Ireland first be named,
And for best-fancied silks let France be famed :
Do thou, thrice happy England, still prepare
This clay, and rest thy fame on earthenware !”

The English system of art education which, if not founded by Prince Albert, owes its growth to the efforts made by him after the Exposition of 1851, has continued to develop since that date. In 1852 there were only twenty art schools, no night classes for artisans, and no free instruction in drawing in the public schools. Twenty years later, the nation pointed with pride to one hundred and twenty-two special art schools, with nearly twenty-three thousand students, and five hundred and thirty-eight night classes, with more than seventeen thousand students, while nearly two hundred thousand children were taught drawing in the public schools without charge. That grand educational force, the South Kensington Museum, which has done more for English industrial prosperity than any other institution, was visited in 1872 by upward of a million persons ; while its art library was used by twenty thousand students and its educational library by fifteen thousand. Five thousand four hundred of its paintings, objects, diagrams, etc., were circulated throughout the nation, and were visited by three-quarters of a million persons. Numerous objects were also loaned to schools of art for purposes of study. This institution is not merely a museum for the amusement of the public, but is also a valuable training school, “where above a thousand students annually obtain education, fitting them for every branch of art work, whether as designers, public instructors, painters, sculptors, architects, engravers, lithographers, or as connoisseurs.”

Not alone in England, but in France, Germany, Belgium, Switzerland, and other continental countries has the system of art education experienced rapid progress. In the little kingdom of Würtemberg, with its two million of inhabitants, there are, according to Stetson, four hundred drawing schools.

Now let us see what has been done in this direction by our own

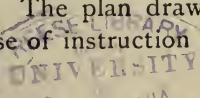
country. In order to ascertain what opportunities are afforded for art training in the United States, the National Bureau of Education, through Mr. I. Edwards Clarke, has recently made very extensive inquiries, the replies to which show that while drawing has been introduced into the public school system of Massachusetts, where also evening schools of drawing and a normal art training school have been established; has been more or less taught in the public schools in many cities and towns of other States; and that mechanical drawing is taught in many schools of science; there are not more than a half dozen schools in the United States for practical training in art as applied to industry and manufactures. The Worcester County (Mass.) Free Institute "offers a three years course of theoretical and practical training in those branches of knowledge that underlie the industrial arts." Drawing is a prominent feature of all the courses of study. The Lowell Free School of Industrial Design, connected with the Massachusetts Institute of Technology, is "intended to train young men and women in practical designing for manufactures." The Woman's Art School at the Cooper Institute in New York City affords free instruction in drawing, wood engraving, painting, and photography. Here, also, a Free Night School of Science and Art is maintained for instruction in mathematics, chemistry, mechanics, natural philosophy, besides architectural, mechanical, and free-hand drawing from copy, cast, and life, and perspective and modeling in clay. The Philadelphia School of Design for Women is open ten months during the year; it is the only one of those here enumerated in which tuition is not free, the charge being forty dollars per annum. Its aim is "the systematic training of young women in a knowledge of the principles and practice of the art of design, to develop and exercise their talents therein, and to qualify them for the practical application of art to the common uses of daily life, and in the tasteful shaping and adornment of our manufactures." The School of Design of the University of Cincinnati (Ohio) is supported by the fund bequeathed to the city for this purpose by Charles McMicken. The course of study extends through four years.

This, according to the National Bureau, comprises the special institutions for industrial and technical art education provided for forty millions of people. It should be observed that a marked peculiarity of the schools here enumerated is that their existence is due, not to the State, but to individuals. While institutions of this class in Europe are established, and fostered and directed by the govern-

ment, here the government has contributed nothing to their organization or continuance.

Massachusetts, however, has made the first step in this direction, and which in after years will be pointed to as one of her proudest achievements. "The movement in favor of art education in Massachusetts," says Mr. Smith, "is distinctly traceable to the influence of a few men, who, from European experience, saw that their country and State were behind the times in the promotion of art; that this materially affected the commercial prosperity of the nation and its character as an educated people; while the natural progress of manufactures and the accumulation of wealth by the people required increased skill in the workmen, and the varied opportunities of art education generally." It is proper that the beginning should be in this ancient industrial commonwealth; for Massachusetts, with upward of two hundred and fifty million dollars invested in manufactures, yielding annually more than six hundred million dollars, may be regarded as the leader of our industrial States. Here, where three million spindles are busy in five hundred cotton and woolen mills, is the home of the American textile industry.

The law making drawing an obligatory study in all the public schools of the commonwealth, from the primary to the high, and requiring every city or town containing over twenty thousand inhabitants to provide free evening instruction in industrial drawing for all persons over fifteen years old, was passed in 1870. Soon after Mr. Walter Smith, then head master of the Leeds School of Art and Science, was made the State director of art education. This, as Mr. E. P. Whipple wittily remarked, was the best importation Massachusetts ever made. Rich in experience acquired by years of study and observation, and with a thorough knowledge of the English and continental systems of art education, Mr. Smith has labored to organize a system for Massachusetts with an intelligent zeal and success that have won admiration from all sides. In 1873 the Legislature further provided for the establishment of a State Normal Art School for the training of teachers of industrial drawing. This institution, the first of the kind in the United States, was opened at Boston in November of that year, and has already done much valuable work; but, owing to a lack of funds, its facilities are entirely inadequate to the wants of the State. There is, however, no doubt that it will soon grow into one of the grandest monuments on Massachusetts soil. The plan drawn up by Mr. Smith comprises a thirteen years' course of instruction in drawing, including three years



in the primary, six in the grammar, and four in the high schools. He also urges the legislature to make the establishment of free evening drawing schools for adults, obligatory upon all cities and towns of the commonwealth having five thousand or more inhabitants, thus making sixty-six instead of twenty-three, the whole number of cities and towns supporting schools of this class. Annual exhibitions of the drawings made during the year are held in the various cities and towns. The results of the latest exhibitions astonished the most ardent friends of the enterprise, and demonstrated conclusively the importance of art education and its success in Massachusetts.

It may, perhaps, seem too extravagant to attribute the industrial superiority, or inferiority, of a nation to its system of industrial education. It would be difficult to imagine the Sandwich Islands heading the column in the industrial arts, even though the group were covered with art schools as completely as it is surrounded by water. And yet look at Switzerland! Deprived by nature of nearly every advantage for industrial progress, a country of mountains without mines, of lakes without outlets, with no ports, no navigable rivers, no canals! Yet among her picturesque mountains skilled industry has found a home. Neither the looms of Lyons nor those of St. Etienne can excel her ribbons. Her watches, jewelry, and carved wood are the admiration of the world. Not only are the products of Swiss industry found in every country but Swiss workmen are everywhere in demand. Now, while this little Alpine nation has developed such admirable industrial skill, it has also developed one of the finest systems of industrial education on the continent. The magnificent polytechnic school of Zürich is crowded with students from all parts of Europe. Other conditions or elements of industrial progress than industrial education are doubtless essential. But every government of Europe which has studied this problem as one of great national importance, looks to industrial education as the chief means of advancement in the industrial arts.

It is a fact full of significance to the United States, which has all the natural resources to lead the civilized world in manufactures, that the nation (the United States) which made the poorest exhibition of industrial products at the Universal Expositions of 1851 and 1867, made also the poorest exposition of industrial schools at home; and that the countries which give to the world the richest silks, the costliest carpets, the most valuable woollen fabrics, the best cotton prints, the most artistic productions of the pottery, the glass factory, the bronze foundry, and the marble works, also have built the most

and the best industrial schools. It is true that certain branches of American manufactures have been wrought to a degree of excellence that has won a leading position in the markets of the world. Connecticut clocks mark the time for almost as many nations as does the sun. American rifles have done their deadly work in every civilized country. American sewing machines and pianos have carried happiness to the homes of every land ; and American agricultural implements have gladdened the farmer's heart in every harvest field under the sun. We have even acquired an enviable distinction abroad in the production of certain domestic implements ; for the American rat-traps, pumps, door locks, sausage machines, coffee mills, washing machines, buckets, clothes-pegs, besides notions and gimcracks of various kinds, have so charmed domestics of foreign countries, that similar articles of home manufacture have been driven from the market. But this group of articles showing the excellence of American industry is the result, not of that wide-spread knowledge of chemistry, of drawing, of designing, and of science generally, which, infused into the working classes, has produced those rare silks, laces, carpets, woolen fabrics, cotton prints, ceramic and glass ware, marbles and bronzes, which come to us from the work-shops of Europe ; but they are the outgrowth of that wonderful inventive faculty, that "Yankee ingenuity" which is indigenous to this country. The fleeces of California are dressed by American machinery, beyond the reach of German ingenuity ; but the peasants of Saxony weave that yarn into designs and colors that America can not rival. A Yankee sends to the cotton fields of the South a machine for picking cotton, the value of which can not be estimated in dollars and cents ; but the English mills put that cotton into prints that are beyond our competition.

An important problem, then, not alone for the manufacturers, but also the publicists of the United States, is presented by the inquiries : Why do the merchants of Liverpool glean our cotton fields ? Why does much of our wool go to Saxony, only to return in fabrics that our skill can not equal ? Why do the looms of Lyons weave better silks than those of Connecticut ? What is the secret, the explanation, of this superior industrial skill of foreign lands ? Can this country profit by the experience of Europe ? England has made substantially the same inquiries, and has reached the conclusion that the superiority of continental workmanship is due, not to greater natural advantages, either in materials, surroundings, or workmen ; but to superior systems of technical education. As Americans are much given to dis-

posing of problems by series of resolutions, the probable procedure in a case of this kind, would be the appointment of a political committee whose report would be about as follows: "Whereas the superiority of many articles of English, French, and German manufacture places them beyond American competition; and whereas it is our first duty to encourage American industry—therefore be it resolved that a duty of fifty per cent. be imposed upon all articles of foreign manufacture which may be superior to our own."

Now let us see how this problem has been grappled by foreign nations struggling for the mastery in the industrial arts. It has already been shown how schools of art began to spring up in the glass and pottery districts of England after the lesson of 1851. But that same international contest afforded the French and Germans a lesson of another kind. They entered that industrial arena, not so much to parade their achievements as to study their weaknesses. They saw that in the great objects of constructive skill, especially in the departments of steel and iron, such as machinery for mechanical and transportation purposes, England held a supremacy founded on the experience of half a century. They saw that in raw materials competition was hopeless. But they said: "Against English wealth we will put continental education; against their abundance of raw material, we will set our greater skill in using it. If we lack that skill, our technical schools must produce it. Our ambition shall be to take their unwrought material and return it to them wrought with our superior skill." From here dates that magnificent system of European industrial education, a system which has dotted the continent with technical schools. So marked was the progress of the French and Germans in iron, steel, and metal manufacture, the great staples of English pride, that such Cassandra-like critics as J. Scott Russell pointed out the danger threatening England from foreign rivalry; but the nation, blinded by self-satisfaction, and fortified in the belief that English supremacy was perpetual, was not thoroughly alarmed till the Exposition of 1867. "We then learned," says that same clear-sighted critic, "not that we were equaled, but that we were beaten, not on some points, but by some nation or other on nearly all those points on which we had prided ourselves." The mills of Prussia were already forging Krupp's steel for English railways, on which the magnificent French locomotives of Creusot began to appear. But it had taken fifteen years to teach the average Englishman what others saw in five, viz., that the long undisputed supremacy of England might be trans-

ferred across the channel; that English mills alone were no match for German and French workshops backed by technical schools.

The English government, at last awakened to a realization of the situation, ordered the manufacturers of the nation to investigate and report upon the causes of this marked improvement in foreign industries. The unanimous answer of all may be given in the report of the Birmingham Chamber of Commerce: "In other countries, the work-people are instructed in science and art; the effect of this is shown in the rapid improvement of their manufactures in beauty of form, excellence of finish, adaptation to the purpose for which they are intended, and cheapness." The government asked the English artisans: "How do foreign dyers paint the silks of Lyons and St. Etienne, the ribbons of Zürich and Basle, the woolen fabrics of Chemnitz, and the worsted goods of Rheims in colors like nature? Why do their goods show a finish which ours can not rival?" The same answer came from the hosiery producers of Nottingham, the shawl makers of Leeds, the silk makers of Coventry, and the Bradford manufacturers of worsted goods. "It is chemistry. France, Switzerland, and Saxony give a thorough knowledge of chemistry, not alone to their professors and scholars, but to their dyers and workingmen. We do not. On the continent, dyers are chemists; here they are not. Only special and thorough instruction in chemistry will enable our workmen to compete with those of the continent." In the same year the English Council of the Society of Arts sent eighty skilled workmen, representing almost as many industries, to the work-shops of France to find out the secret of French superiority in certain branches of manufacture. Their unanimous reply was: "Their industrial education has caused it." Lord Stanley addressed similar inquiries to the English foreign consuls; and the reports were the same from France, Switzerland, Prussia, Saxony, Bavaria, and Belgium—"Industrial Education."

Here then is a lesson for the United States.

"Let those be teachers who themselves excel."

The experience of Europe teaches that nations with the poorest natural advantages, by industrial education, may take a front rank in industrial prosperity; and that wealth of raw material does not necessarily secure industrial supremacy. What prize, then may be within the reach of this country? With an agricultural wealth to which no limits can be assigned, with mineral riches everywhere bursting through the surface, with an abundance of water power that no number of mills can exhaust, with a network of railroads, water channels, and telegraph,

lines, that annihilate distance between the field and the factory, the mine and the mill—with all these and more riches, not to advance, not to rival the skilled industry of Europe, is not a loss merely, but a crime. Here is the cotton field of the world; gold and silver mines that supply all nations; beds of coal and iron that can never be exhausted; forests shading every hill-side, and fleeces whitening every valley. What is wanting to secure industrial supremacy? Let Scott Russell answer: "The highest value in the world's markets will be obtained by that nation which has been at most pains to cultivate the intelligence of its people generally, and afterward, to give each the highest education and training in his special calling. In other words, the value of the nation's work will vary with the excellence of the national system of technical education." Let Humboldt answer: "National wealth and the increasing prosperity of nations must be based in an enlightened employment of natural products and forces." Let Justus Liebig answer: "The nation most quickly promoting the intellectual development of its industrial population must advance as surely as the country neglecting it must inevitably retrograde." Let Sir Robert Peel answer: "If we are inferior in knowledge, skill, and intelligence to the manufacturers of other countries, the increased facilities of intercourse will result in transferring the demand from us to others." Let the experience of Europe answer: "Industrial supremacy is the prize of industrial education."

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
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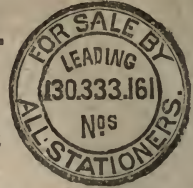
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